

INDEPENDENT MONITORING BOARD
OF THE GLOBAL POLIO ERADICATION INITIATIVE

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EIGHTEENTH REPORT

THE NEW NORMAL.

FINDING THE PATH BACK TO ERADICATION
IN THE TIME OF CORONAVIRUS

INDEPENDENT MONITORING BOARD.

The Independent Monitoring Board provides an independent assessment of the progress being made by the Global Polio Eradication Initiative in the detection and interruption of polio transmission globally.

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The IMB's reports are entirely independent. No drafts are shared with the Polio Programme prior to finalisation. Although many of the data are derived from the GPEI, the IMB develops its own analyses and presentations.



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INTRODUCTION.

The 17th IMB report, published in November 2019, followed the Board’s meeting to review the Polio Programme’s performance. The IMB found the Polio Programme at a critical point with the eradication process seriously under threat. Wild poliovirus transmission in Pakistan was surging. A huge and unprecedented immunity gap had opened up in Afghanistan as a result of the Taliban denying the Polio Programme access to communities. Multiple type 2 vaccine-derived poliovirus outbreaks were sweeping across Africa on a scale not imagined when the switch from trivalent to bivalent oral polio vaccine took place in 2016.

The 17th IMB report described this situation as a crisis. It identified deep-seated root causes that had led the Polio Programme into such a slump in its performance. Many of these had been highlighted in previous IMB reports. However, because over recent years the polio numbers were broadly progressing in the right direction, an attitude of “almost there” meant that the problems had not been definitively resolved.

These problems included the politicisation of the oral polio vaccine. It was being used as a source of conflict between political parties and as a bargaining tool by interest groups and factions with influence on whether communities

participated in the Polio Programme in Pakistan. Communities most at risk of polio were often those with multiple social and economic deprivation and a lack of basic infrastructure such as water, sanitation and public health services. Hostility towards the oral polio vaccine had been growing in these communities for some considerable time. This was being fuelled by: a resentment that government did nothing to help them, yet wanted them to accept the polio vaccine as a necessity; little understanding of why so many doses of the vaccine were required (multiple knocks on the door); and fears, rumours and suspicions that the vaccine was harmful to children.

In addition to these major political, social, and communications problems, there were also weaknesses in management and organisation at an operational level. The basic technical performance of the Polio Programme was not reaching the levels of best practice that had helped stop wild poliovirus transmission in other regions.

The findings and necessary action to address the crisis, identified by the 17th IMB report, were accepted by the Polio Oversight Board (POB) of the GPEI and by the governments of the polio-endemic countries. However, within weeks the COVID-19 crisis had broken, and polio teams and



resources were repurposed in the fight against the pandemic coronavirus.

It is essential that the Polio Programme remembers that, by the end of 2019, it stood on very shaky ground. There were massive challenges both in interrupting wild poliovirus transmission in the endemic areas and in managing many vaccine-derived poliovirus outbreaks.

Cases of poliovirus had increased fivefold between 2018 and 2019. There was uncertainty and doubt surrounding the effectiveness of strategies and tools.

At the Polio Oversight Board meeting, that immediately followed the Abu Dhabi Pledging Conference, on 20 November 2019, donor countries made an unprecedented demand that the GPEI should review and reform its governance and accountability structures. This did not reflect a reduced determination by these donors to get the job done, but rather the depth of their concern that there was no clear end in sight for polio eradication, and a lack of clear accountability in a \$1 billion a year spending programme.

Even before COVID-19, many donor countries' overseas aid budgets were being heavily scrutinised. With the coronavirus's savage impact on national economies, the case that polio dollars are safe in GPEI hands will, in future, need to

be more convincingly made to the governments and taxpayers of these countries. At the same time, there is greater need for resources than originally planned.

Each year of failure to eradicate polio results in enormous health, opportunity, and economic costs. The budgetary needs of the programme are increasing steeply. They will increase further if vaccine-derived poliovirus outbreaks continue to occur on a wide scale. Also, conducting polio campaigns in a COVID-19 environment will be much slower, will need many more precautions (such as personal protective equipment), and, as a result, will be more expensive.

This 18th IMB Report follows videoconference meetings that the Board held with the GPEI Strategy Committee, donors, wider polio partners and the governments of the polio-endemic countries on 29 and 30 June and 1 July 2020. The discussions were complex because they had to take account not only of the programmatic weaknesses and action needed to transform them before COVID-19 struck, but how to build the impact of COVID-19 into the GPEI's ongoing strategic approach to polio eradication. The conversations also had to explore whether the period of pause and reflection, imposed on the Polio Programme by COVID-19, had caused the leadership of the Polio Programme to think differently about the path to eradication.



COVID-19: IMPACT AND IMPLICATIONS.

When COVID-19 was declared a pandemic, the Polio Oversight Board moved quickly to instruct that GPEI structures, people and resources (e.g. the Programme staff, logistical capacity, laboratories, communication systems) should be repurposed to help in the fight against the new disease. The Polio Programme has been in an emergency phase since then. All vaccination rounds were stopped for several months before restarting in late July 2020. Critical functions like surveillance were maintained to some degree. The interpretation of the advice has taken different forms in each country. The extent of maintenance of polio-essential functions, other than vaccination, has varied too.

It was obvious from the outset of the pandemic that many of the reservoirs of poliovirus were likely to be places where COVID-19 would hit communities hard. The Polio Programme knows these areas, regularly maps them, and maintains community engagement platforms within them. That is something very useful and has been commandeered, prioritised and integrated into the COVID-19 response.

In 52 countries across the African, Eastern Mediterranean, and South-East Asia Regions of WHO, over 600 polio staff and 3,000 others have been deployed in the COVID-19 response, 60% of them at subnational level.

Essential immunisation programmes have not generally been suspended, though they have been widely disrupted and coverage rates have fallen in places.

Polio surveillance has been continuing but there has been a widespread and substantial impact on it, including:

- Decrease in case detection in the Western Pacific, South-East Asia, and Eastern Mediterranean Regions;
- Reduction of environmental surveillance in several countries of the South-East Asia, and Eastern Mediterranean Regions;
- Major disruption in transport of polio-related

- laboratory specimens in the African Region;
- Repercussions being severely felt in all 21 polio high-risk countries (endemic and outbreak).

The GPEI leadership told the IMB that in a comparison of surveillance overall, by this time in 2019, there had been 42,000 acute flaccid paralysis cases reported compared to 29,000 by the end of June 2020. This is a substantial decline, predominantly driven by COVID-19. The South-East Asia Region accounts for half that decline, followed by the African Region and then the Eastern Mediterranean Region.

Overall, since late February and early March 2020, more than 60 polio vaccination campaigns, of different geographical scales, have been paused in 38 countries. Six million doses of vaccine had been delivered to those countries. They could not be used. Another 100 million doses have been procured, but still await shipment because of air freight disruption. Some of these vaccines have been delivered, in the weeks running up to vaccination campaigns that were resumed in July 2020. However, other batches of vaccines will be nearing the end of their shelf life and the Polio Programme will have to bear the costs of the waste and resupply. Also, some of the suppliers are reaching storage capacity and may well be forced to stop production, and there may be longer-term implications for manufacturers. The COVID-19 context for the Polio Programmes in Pakistan, Afghanistan and Nigeria is considered in the country sections of this report.

The Polio Programme is now poised for resumption when vaccine rounds can be planned and start again. The GPEI has set up a new committee to oversee this process, to be called the *GPEI Continuity Planning and Facilitation Group* (PFG). Its objectives include:

- To facilitate development and tracking of a comprehensive global level GPEI workplan, in support of regional and country polio eradication activities, to adjust to the COVID-19 pandemic;

- To identify any long-term strategic adjustments to the *Polio Endgame Strategy 2019–2023* that may be required in the post-emergency phase of the COVID-19 pandemic in order to ensure sustainable, effective programme operations.

Polio has been the first big global health programme to get out in the field in the COVID-19 era. There are possibilities but there are also risks. There are hopes that the greater recognition of the importance of public health created by the COVID-19 pandemic will energise public health initiatives, including polio eradication, but whether this will occur remains to be seen.

IMB ASSESSMENT

The handling of the COVID-19 pandemic in many polio-affected countries and subnational jurisdictions has brought a great deal of praise for the Polio Programme. It should be rightly commended for how quickly it was able to pivot staff to respond to COVID-19. It shows how investments in polio can be used in a much broader way for global health security. The Polio Programme's assets, staff, organisational structures and disease control tools and methods have been deployed to fight the pandemic menace in an exemplary fashion. Many staff have put themselves at risk in a selfless way that demands gratitude and respect from everyone. Tragically, some have died in the process.

UNLOCKING THE POLIO PROGRAMME AND ONGOING PANDEMIC THREAT

This large-scale redeployment of the polio eradication planning and delivery system raises an immediate dilemma for the GPEI as well as for national, provincial and local governments. Polio vaccination rounds and associated essential activities must resume urgently, yet the need for close attention to the threat of COVID-19 will be there for the foreseeable future. This is about more than creating safe conditions for polio staff and communities during the vaccination process. It is also about controlling, and dealing with, the further circulation of COVID-19 and the impact that it has.

To stop the wild poliovirus and vaccine-derived poliovirus levels increasing, it is essential to expand the resumed vaccination programme quickly. Can the Polio Programme roll out vaccination rounds that are effective in the places that need them? If not, there will be a large increase in cases of both kinds of poliovirus. For example, modelling data suggest that in Pakistan there is a high risk of wild poliovirus cases reaching 500 by the end of 2020 (with actual infections hundreds of times that number), and vaccine-derived poliovirus cases reaching 1,000.

Most polio workers have been managing a dual role: working on the front line to control the COVID-19 pandemic, while trying to keep some polio-essential functions ticking over. However, there is now a real risk, as polio staff start to move back to their polio work, in how the two roles are managed.

The IMB heard little about clear policies and plans to deal with these competing demands and how they might limit the impact of the restarted polio campaign. Also, if the COVID-19 cases continue to surge or return as second or third waves in polio-affected areas, what will be the priority? Will it be to fully protect and sustain the unlocked polio campaigns or to return polio staff and assets to fighting COVID-19?

FAST MOVING POLICY DECISIONS: GLOBAL-LOCAL BALANCE

The reality is that the Polio Programme will have to coexist with, and adjust to, the dominant effect of the COVID-19 pandemic. That will be a fact of programmatic life for quite some time. It will mean designing strategies in advance to operate effectively in all potential scenarios, given that indecisiveness and inconsistency could lead to explosive outbreaks of either or both diseases. What can be achieved will be quite different according to the countries, the smaller areas below national level, and to the way that the COVID-19 pandemic evolves within them.

Policy decisions and plans will also have to be made with many more local considerations in mind, but without precedent to guide the path. It will be essential that the new global committee (*GPEI Continuity Planning and Facilitation Group*) does not slow local decision-making. Stultifying influences will be measured in COVID-19 deaths and more polio cases.

An example of the granular nature of the required policy decisions is what the IMB was told by the Sindh provincial team. It is intending to expand its polio workforce in order to deal with the failure to eliminate poliovirus circulation. Training and mobilisation of the new staff will be a challenge with social distancing and other practical precautionary measures needed in the wake of COVID-19 outbreak. Should they go for physical gatherings of newly hired staff or for virtual training? Many of the recruits will be poor and will not have access to, or experience of, videoconferencing technologies. So, virtual training may not be possible. Face to face group work may carry the dangers of COVID-19 encounters and spread.

Even the hiring and appointment process itself will be a serious challenge because it will involve, for example, some 5,000 to 6,000 new workers in mobile teams in 89 union councils of Karachi.

Will the Polio Programme provide sufficient personal protective equipment to the law enforcement agencies that are engaged to provide security in many campaigns? They can number in the thousands.

All this demonstrates how a global and national framework of guidance will be essential but that provincial and local teams have to be empowered to take operational decisions based on a well-understood context.



REACTION OF COMMUNITIES TO POLIO IN THE CONTEXT OF COVID-19

It is difficult to be sure how communities will react to resumed polio vaccination programmes in a period of continuing risks with COVID-19, especially in areas with high pre-existing oral polio vaccine refusal levels, or in communities with deep-seated hostility to the Polio Programme. Teams will be vaccinating children, may be touching them, and will be wearing personal protective equipment. These novel circumstances may have a negative impact on perceptions of the vaccination process, engender fear, or provoke outright rejection of the vaccine. Good communication strategies, use of trusted local vaccinators and listening to community leaders and influencers will be vital here.

Then there is the pre-COVID-19 plan to respond to the high level of multiple deprivation in many countries, and the additional hardship that the pandemic will have brought.

In its 16th Report, which followed a commissioned field review of the polio-endemic countries in mid-2018, the IMB drew attention to the potential transformational impact of action to boost the infrastructure of poor, multiply-deprived communities. Apart from the case for this on humanitarian grounds alone, the IMB foresaw two benefits for polio eradication. First, improved water supplies and sanitation create environmental conditions less favourable to poliovirus circulation. Second, communities would feel better served by their governments and more likely to accept the benefits of a polio vaccination programme. The IMB made this recommendation in October of 2018:

The Polio Oversight Board members should use the stature of their offices urgently to convene key development partners and donors (perhaps as a multidisciplinary taskforce) to plan a rapid, locally-based assessment of the needs of multiply-deprived and polio vulnerable communities in the three endemic countries; this group should follow through with an action plan to provide a sustainable level of infrastructure and basic services (including water, sanitation, hygiene, and refuse disposal); and urgent resource mobilisation should be part of this work.

The Polio Oversight Board, meeting in September 2018, heard a preview of the 16th IMB report and readily endorsed this recommendation. The Executive Director of UNICEF responded by offering \$50 million, potentially to target nutrition and sanitation, for 50 polio areas identified as high-risk.

The GPEI leadership emphasised that they were a technical programme and not funded to pay for wider initiatives of this sort no matter how pivotal to polio eradication. They believed that they must work with development agencies to resource them.

A year later, in its 17th report, the IMB was still pushing for this crucial change and recommended that the Governments of Pakistan and Afghanistan should work with all partners (led by UNICEF) to progress these new development initiatives much more quickly and on a larger scale.

So, despite the recommendations made on water, sanitation, hygiene and basic health services in both the 16th and 17th IMB reports, action to address this critical gap has been very limited.

Working with the Pakistan Ministry of Health and other partners, the programme led by UNICEF has been aligning with the country's Disease Control Priorities work. It has developed a "sub-package" for polio within the Universal Health Coverage Essential Package of Health Services (in collaboration with the Disease Control Priorities project). This will be implemented in the 40 super-high-risk union councils starting as seven pilots, in three provinces (Karachi, Peshawar and Quetta Block). All this is now being costed and an investment case will be made. Then funding will be mobilised for implementation. The cost of implementing all basic interventions (water quality and quantity, safe sanitation and hygiene) is estimated at around \$24 million for all super-high-risk union councils. That would benefit three million people.

In the meantime, the "health camp" approach during campaigns has started in core reservoirs. The theme of "Polio Plus" is delivery of basic healthcare services as well as interventions to overcome malnutrition, unsafe water and sanitation challenges. It is operated through an expanded partnership with relevant stakeholders, using the high-level ownership of the Polio Programme.

In Afghanistan, a plan on integrated services is being developed. The plan targets the three high-risk provinces in the south region: Helmand, Kandahar and Uruzgan. It will include the establishment of new health facilities in these provinces, as well as mobile health teams and actions to improve utilisation of basic health services. The plan also includes: health weeks, enhancing existing health facilities, partnerships with for-profit private providers, strong

Emergency Operations Centres in high-risk provinces, delivery of water, sanitation, hygiene, nutritional and other services in community and facilities settings.

These vital measures to improve infrastructure, living conditions and the provision of services must continue to be implemented with urgency. It is accepted that the GPEI must seek development partners and funding to deliver these benefits, but it must assume a strong and active role itself. This is all moving too slowly.

HEALTH AND PROTECTION OF POLIO WORKERS

The health and safety of polio workers will be very important. No one will wish that members of this workforce become infected nor that they be the source for further spread of the COVID-19 virus. Obtaining and continuously supplying personal protective equipment for staff engaged in house-to-house coverage is likely to be a huge challenge especially in places that have been struggling with the procurement, supply and cost of such equipment for front-line hospital staff.

VERTICAL OR INTEGRATED: DECISIONS ON A NEW NORMAL

In its last report, published in November 2019, the IMB stated this about the vertical design of the Polio Programme:

[It] has become a major problem for the Polio Programme and is threatening the very prospect of polio eradication. This is for two reasons. First, the scale and scope of the vaccine-derived polio disaster has, as one of its root causes, low levels of essential immunisation. Second, the only hope of getting many polio-affected communities to accept the oral polio vaccine at all is to embed them within essential immunisation packages. The combination of widespread hostility and suspicion towards the oral polio vaccine plus the number of knocks on the door required to achieve herd immunity mean that a purist vertical programme, based on heavy persuasion, can no longer work everywhere.

In response to the last IMB report, initiatives in Pakistan and Afghanistan have sought to align polio eradication and expansion of essential immunisation coverage. Incorporating polio into

multi-antigen campaigns is a must, for ethical as well as pragmatic reasons. Doing so will increase polio vaccine uptake and may blunt the substantial increase in vaccine-associated mortality which is likely to follow the COVID-19 disruption of routine health services.

The Pakistan Government has declared the Expanded Programme on Immunisation a priority and intends to achieve universal immunisation coverage by 2022. Provinces are gearing up to undertake necessary steps to vaccinate the unreached, newborns and zero-dose children.

Under the urban immunisation initiative, slum populations in 10 mega cities of the country have been identified using satellite mapping. Targeted interventions are underway in Karachi and Lahore. In some super-high-risk union councils, investment in integrated service delivery packages has been made. Workshops have been conducted and essential immunisation strengthening plans developed for the super-high-risk union councils in Karachi, Quetta Block and Peshawar.

To improve the management and integration of the essential immunisation programme, the Pakistan Government has brought polio eradication and essential immunisation under a single umbrella. The National Emergency Operations Centre Coordinator, is now also the National Program Manager for essential immunisation. A five-year, comprehensive plan is being finalised. To streamline budgetary support, the Pakistan Government plans to shift the financing mechanism from the development to the recurrent side of the budget.

In Afghanistan, four rounds of multi-antigen campaigns are planned in high-risk provinces (Kandahar, Helmand, Uruzgan and Farah). These campaigns will include expanded age groups for oral polio vaccine and inactivated polio vaccine.

Essential immunisation strengthening is focused on 29 high-risk districts for polio eradication. An extensive microplanning revision exercise in Kandahar has been completed. This process will be replicated in other high-risk provinces. Health facilities are being upgraded to take up essential immunisation activities, particularly in Kandahar. WHO polio eradication staff are being trained on essential immunisation.

The IMB anticipated, following the COVID-19 pause, that there would be a clear idea from the GPEI of the future design and philosophy of the Polio Programme.

Is the Polio Programme looking to throw its full weight behind a re-energised vertical programme approach targeting both wild and vaccine-derived polioviruses? Or, is it thinking that, in the next six months, there is an opportunity for a different way of pursuing the eradication goal?

Many of those present at the IMB meetings expressed the view that it is really important to try to leverage the integration opportunities that exist. Even before COVID-19, the Polio Programme had not made as much progress as it should have in relation to integration and delivery of other interventions.

However, at strategic level, it does not seem to have been conclusively debated, though the term “integration” was mentioned in each individual session of the IMB meeting. Seemingly, there are differing views within the leadership of the Polio Programme partnership.

This lack of consensus is mirrored in the GPEI guidelines for restarting campaigns, and the decision trees in the documents. There is no real polio policy landscape analysis. There are no pros and cons of an integrated approach to finishing the job of eradication.

While the *Polio Endgame Strategy 2019–2023* states a clear necessity for integrated services, there is currently no budget line to support it, as would be expected in project management terms. This gives the impression of there being no true commitment to integration, though the report does speak of ongoing work to “map” the old budget structure onto the new strategy.

For now, integration seems to be at best “If it’s feasible, you should do integration”, and at worst mere rhetoric.

Arguably, in communities under siege from a frightening new disease, people will be even less tolerant of the idea that polio drops are a priority for their family’s needs. What is the strong rationale for doing polio-only campaigns – either outbreak response or regular pre-emptive campaigns – in an environment where basic needs have not been met, where people have no work opportunities, where people are in much worse shape than they were prior to COVID-19? Where is the wisdom in restarting polio-only campaigns without thinking about different models of integration to match diverse local contexts?

GLOBAL POLIO SITUATION: OVERVIEW.

The GPEI leadership reported on the Polio Programme's consolidated response to the IMB's most recent recommendations (17th IMB Report). Their reported actions include:

- High-level advocacy from GPEI leadership and other influencers to encourage the Pakistan Government to fully commit to polio eradication;
- In Afghanistan, negotiation with anti-government groups through regional government intermediaries;
- New communication approaches being explored to improve vaccine acceptance, particularly within Pashtun communities;
- Pakistan's essential immunisation programmes have aligned workstreams to improve essential immunisation coverage;
- The Amman Hub and GPEI contractors have enhanced Afghanistan's and Pakistan's data analysis capabilities and provided a set of programme performance measures;
- GPEI is encouraging development agencies to further invest in Afghanistan's and Pakistan's sanitary and basic health infrastructure and to provide other services in poor communities;
- The *Strategy for the Response to type 2 Circulating Vaccine-Derived Poliovirus, 2020-2021* to be coordinated through an interagency, multidisciplinary team, synergising the efforts of the global partnership.

There are now only two countries in which wild poliovirus is endemic: Pakistan and Afghanistan.

Nigeria was able to successfully present certification data in June 2020. It has been four years since the country's last wild poliovirus case. In the surveillance sites, since 2016, all 754 local government areas in the country have reported at least one acute flaccid paralysis case annually; 87% of the local government areas have been able to meet both polio surveillance indicators on an annual basis.

The march to reach missed children in Borno continues. The number has declined since 2016 and is now 31,000. So, there are still unreached children in Nigeria, but at comparatively low levels. By January 2020, Nigeria had made substantial progress in controlling the country's type 2 vaccine-derived poliovirus circulation.

A polio-free Africa imminent. The three other final polio-affected countries in Africa – the Central African Republic, Cameroon, and South Sudan – also successfully presented their data to the Africa Regional Certification Commission for Poliomyelitis Eradication. The Polio Programme will be receiving the annual reports of the 43 other African Region countries and ensuring that they meet the standard. This opens the door for August 2020 to be the moment that the African Region could be certified wild poliovirus-free.

During its deliberations, the Africa Regional Certification Commission for Poliomyelitis Eradication expressed concern about the current vaccine-derived poliovirus outbreaks. It emphasised the need for continuing surveillance and to improve essential immunisation coverage.

Deterioration in endemic countries. The GPEI leadership and teams gave situation reports on the polio epidemiology in the two endemic countries. The IMB met with the countries' health ministers and polio teams the next day to discuss matters in more detail.



In Pakistan, case and environmental detection shows that wild poliovirus is circulating in many locations across the country. It is circulating in its traditional reservoirs of Karachi and the Quetta Block. Sustained transmission in southern Khyber Pakhtunkhwa (KP) Province has created a new reservoir. It is now in the previously polio-free areas of Sindh and Punjab.

The outlook for polio eradication in Pakistan is seriously worsened and complicated by the outbreak of vaccine-derived polio. Despite interventions, transmission has not been stopped in outbreak areas. It has now spread to all provinces of Pakistan, and across the border into eastern Afghanistan.

The high number of children with no, or low, immunity to the type 2 poliovirus means that an explosive further outbreak is highly likely, if there is no early, strong and appropriate vaccination response.

In Afghanistan, intractable inaccessibility dominates the situation. There has been uninterrupted transmission of the wild poliovirus in the southern region since 2017. There is also uninterrupted transmission in the east of the country. The wild poliovirus is also in the previously polio-free north and west. There is an expanding outbreak of type 2 vaccine-derived poliovirus in the east. As much of the population has no, or low, immunity to type 2 poliovirus, a large further increase and consequences for the Polio Programme in other parts of the country is inevitable.

Vaccine-derived polio crisis. The large and widely dispersed outbreaks of type 2 vaccine-derived poliovirus, that began in 2019 have stunned the polio world. They were unexpected and on a formidable scale.

There are multiple continuing outbreaks in the African Region, and in new geographies too, for example, in the Philippines and Malaysia. The last two polio- endemic countries, Pakistan and Afghanistan, are also affected. By the end of July 2020, there had been five times as many vaccine-derived polio cases worldwide compared the same time in 2019.

The unsettling aspect of the causation is that the emergency issuances of monovalent oral polio vaccine type 2 have caused paralytic polio well outside the outbreak zone in which they were being deployed.

The outbreaks seem to be expanding, in part because of the COVID-related cessation of polio field activities. The inability to act in March 2020 created further dangers.

On the positive side, the vaccination rounds with monovalent oral polio vaccine type 2 have been effective in stopping most of the outbreaks. Less than 7% of cases have occurred in districts after a second round and 77% of districts have shown no detections after their second vaccination round.

However, it is not the same everywhere. For example, in places such as the Democratic Republic of Congo, Kwara in western Nigeria, some inaccessible parts of Borno in northern Nigeria, and in Somalia there are extended breakthroughs in cases despite multiple vaccination rounds.

In early 2020, the GPEI published a new document to set out its intended approach to eliminating vaccine-derived poliovirus: *Strategy for the Response to type 2 Circulating Vaccine-Derived Poliovirus, 2020–2021*. It fits in as an addendum to the *Polio Endgame Strategy 2019–2023*.

The strategy development process was led by GPEI, in consultation with key polio and immunisation technical advisory bodies.

The strategy covers the period January 2020 to June 2021 and presents a series of risk mitigation measures to stop the spread of type 2 vaccine-derived poliovirus. It prioritises the use of Polio Programme assets and utilises a new vaccine to improve outbreak response outcomes. This new vaccine, called novel oral polio vaccine type 2, is anticipated to provide similar intestinal immunity to the current oral polio vaccine type 2 while being more genetically stable and thus lowering the risks of vaccine-derived viruses and paralytic cases. Novel oral polio vaccine type 2 is expected to be available in mid-2020 via the WHO Emergency Use Listing.

The new strategy's main objectives are:

- Rapidly detect and control type 2 vaccine-derived polio outbreaks while minimising the risk of further spread;
- Ensure an adequate supply of existing oral polio vaccine type 2 until it is no longer required;
- Utilise inactivated polio vaccine to boost immunity, mitigate paralytic risk and improve population immunity;
- Continue to accelerate inactivated polio

vaccine catch-up campaigns in countries with delayed introduction;

- Synergise efforts with the Expanded Programme on Immunisation and Gavi to strengthen immunisation systems in high-risk areas and in populations with low type 2 poliovirus immunity;
- Support novel oral polio vaccine type 2 licensing, production and distribution processes through the GPEI working group;
- Articulate a contingency plan in the event that type 2 vaccine-derived poliovirus epidemiology outstrips the current supply of vaccine and human and financial resources;
- Ensure member states, GPEI stakeholders and the general public understand how the programme proposes to mitigate and manage vaccine-derived poliovirus risks.

The IMB was told by the GPEI leadership that the resumption of activities to combat type 2 vaccine-derived poliovirus will take a multifaceted approach that includes intensive monitoring, both on the polio side - looking at surveillance and other polio-essential functions - and also on the COVID-19 side. It will include new tools, such as field guides on how to conduct rounds in the context of the COVID-19 pandemic. It will also include updated risk assessments based on modelling data. These methods have already resulted in rescoping of several responses.

Additionally, new 2020 budgets and budget templates have been developed and approved to ensure that the response staffing is in place when everything starts up again.

Budgetary shortfalls. The GPEI budgetary situation in 2020 is not greatly affected because many mainstream programmatic activities have been slowed down or stopped. However, 2021

will be a very difficult year. The GPEI anticipates increased costs when vaccination rounds are resumed because the poliovirus will have spread. This is known already, even though surveillance is not being maintained everywhere. Both wild and vaccine-derived polioviruses are spreading so there will have to be larger campaigns.

These campaigns will be more expensive because of the need to protect communities and health workers against COVID-19.

In addition, the GPEI will have to make substantial investments in vaccine for outbreaks of the type 2 vaccine-derived poliovirus. A stockpile has to be created which is to be drawn on extensively and then will need to be replenished. That large cost was not in initial budget estimates. On top of this, the overall impact of the withdrawal of US Government funding to WHO is not yet known.

The GPEI scenarios all have the Polio Programme in the red in 2021, for anywhere between \$234 million and \$890 million, depending mainly on how the outbreaks evolve.

A number of options are being considered, including trying to increase income, scaling back the Polio Programme (e.g. capping endemic countries to a certain level) and pulling out of preventive campaigns in countries where there is no outbreak or wild poliovirus.

Governance review. At its November 2019 meeting, the Polio Oversight Board received a request from polio donor countries to clarify GPEI management and governance processes and to ensure due diligence is followed. The Board asked the Strategy Committee to take this matter forward, in consultation with donors.



An internal review process was instigated. It was led by the Bill & Melinda Gates Foundation, working with the GPEI Strategy Committee. A diverse range of views were gathered via a series of surveys, workshops, interviews and stakeholder consultations.

The review reported in July 2020 and made the following recommendations:

1. Expand the Polio Oversight Board and Strategy Committee memberships to include country governments, major donors and others.
2. Restructure and rebalance the Strategy Committee's strategy and management roles to ensure the day-to-day management of the programme does not impede its strategy and decision-making responsibilities.
3. Strengthen the Finance and Accountability Committee's risk and audit role to have better alignment between Programme and financial goals.
4. Conduct an internal and external review of management groups reporting to the Strategy Committee to ensure strategic alignment, streamlined operations and implementation of recommendations.
5. Develop a plan to increase two-way communication between Polio Oversight Board and Strategy Committee members and regional and country teams.
6. Establish an independent Strategy Committee chair to objectively facilitate discussion on strategy and management.
7. Strengthen information management to improve transparency and understanding of the Programme's structures, decision-making processes and flow of information.
8. Improve communications so that all relevant stakeholders are up to date on the activities, progress and challenges of the Programme.

As the report was issued after the IMB meeting, there was no chance to discuss it with the GPEI leadership. However, the IMB makes some observations on what is proposed in the next section of this report.

IMB ASSESSMENT

The two final polio-endemic countries are beset by three epidemics at once: wild poliovirus, vaccine-derived poliovirus and pandemic coronavirus. Unless renewed, well-planned and sustained polio vaccination is resumed for the remainder of 2020, the consequences of the inevitable large outbreaks of both kinds of poliovirus will be dire for Pakistan, Afghanistan and probably other countries as well.

The position has worsened since the last IMB report. Actions in Pakistan being described as "transformative" are either underway or being lined up for implementation.

The situation of Pakistan and Afghanistan is examined in depth in the country sections later in this report.

VACCINE POLICY

In the more than 30 years of the global polio eradication drive, which began by using the Sabin oral polio vaccine on a mass scale in low- and middle-income countries (following the commitment to eradication in 1988), there have only been two major vaccine policy decisions with worldwide implications in the past, and a third is a current necessity.

The first was the introduction of the Salk inactivated polio vaccine. This has allowed countries to switch to an injectable vaccine that provides longer lasting immunity while not generating any polio cases itself. It is the sole form of polio protection in most high-income countries and, over the last few years, has been introduced in all countries, even those that need to maintain oral polio vaccine use to block or eliminate the circulation of wild poliovirus. There is the possibility that use of the inactivated vaccine, while reducing paralytic polio, may have made surveillance for polio more challenging,



because the proportion of infected individuals who become paralysed is smaller than in a population in which the inactivated vaccine is not used. This is not a criticism of the introduction, but it may have been an unanticipated consequence.

The second was the so-called “switch” from trivalent (polioviruses types 1, 2 and 3) to bivalent (polioviruses types 1 and 3) oral polio vaccine across 150 countries in 2016. This was done to remove type 2 poliovirus from the oral polio vaccine. It had been eradicated in its wild form but was capable of producing a vaccine-derived form of paralytic polio.

As part of the switch, an inactivated polio vaccine was introduced to maintain type 2 immunity following the withdrawal of the trivalent oral polio vaccine. Also, a monovalent oral polio vaccine type 2 was brought into use for the outbreaks of type 2 polio cases that would inevitably occur as population immunity to this poliovirus type waned.

Four things went wrong with the switch policy decision: a) countries failed to raise immunity to type 2 poliovirus pre-switch and did not get high enough coverage with the inactivated polio vaccine to prevent type 2 vaccine-derived poliovirus cases post-switch; b) the number and geographical dispersal of outbreaks was far beyond what prior modelling studies predicted; c) the monovalent oral polio vaccine type 2, used for outbreaks, has provoked its own outbreaks of vaccine-derived poliovirus in areas beyond its zone of use; and d) insufficient stockpiles of monovalent oral polio vaccine type 2 had been ordered and produced.



The third major vaccine policy decision is necessary because of failure of the switch. The scale of vaccine-derived polio is now a crisis. As a result, a novel oral polio vaccine type 2 has been developed to be free of the risk of inducing vaccine-derived polio. This novel vaccine, having passed through clinical trials, is poised for deployment in countries with outbreaks of type 2 vaccine-derived poliovirus.

In the next few months, further difficult vaccine policy decisions will have to be made.

Three oral polio vaccines type 2 are now available: *monovalent* (developed for use in outbreaks (mOPV2)); *novel* (developed so as not to produce vaccine-derived viruses (nOPV2)); and *trivalent* (reverting to the pre-switch position (tOPV)). The bivalent vaccine is still the version used to eliminate the wild poliovirus that is exclusively type 1, and to stop type 3 vaccine-derived polio outbreaks.

Thus, as it exits from COVID-19 lockdown, with an urgent need to restore high levels of oral polio vaccine and inactivated polio vaccine coverage in affected and non-affected areas, the Polio Programme has five polio vaccines to potentially deploy – alone or in combination.

The policy decisions on how to deploy them must take into account: a) the wild and vaccine-derived epidemiology and modelling predictions at country and subnational levels; b) availability of vaccines; c) the need for a paced introduction of the novel oral polio vaccine, along with evaluation and safety monitoring; d) community acceptance; and e) cost.

A key early decision is what to do in Pakistan, where the Programme must bring the vaccine-derived polio outbreak under control urgently, while continuing to combat wild poliovirus. The novel vaccine would not seem to be a good candidate for early introduction to Pakistan. There will be nowhere near enough novel oral polio vaccine initially for Africa and Pakistan.

Furthermore, the Polio Programme management in Pakistan is aware that part of the reason for community hostility to the oral polio vaccine is the number of visits that vaccinators make to houses. So, using more than one vaccine is not an attractive option and would require very complex public messaging and explanation.

Then there are questions of supply. Other countries with type 2 vaccine-derived polio outbreaks will want the monovalent oral polio

vaccine type 2 (either in outbreak or novel versions).

This really gives two options for Pakistan. Either to use monovalent oral polio vaccine type 2 plus bivalent oral polio vaccine (types 1 and 3). Or, to revert to the trivalent oral polio vaccine (types 1, 2 and 3). On the face of it, the reintroduction of the trivalent oral polio vaccine seems the best option because it combats the type 1 wild poliovirus and the type 2 vaccine-derived virus at one and the same time. Whereas, using an outbreak monovalent oral polio vaccine type 2 and the current bivalent oral polio vaccine means two vaccines being deployed.

The reintroduction of the trivalent oral polio vaccine could put countries in exactly the same situation as that which followed the switch in 2016. If population immunity to type 2 poliovirus does not become high enough, another switch from trivalent to bivalent oral polio vaccine could land the eradication effort back to where it is now – with a re-emergence of large numbers of type 2 vaccine-derived polioviruses.

Currently, the trivalent oral polio vaccine may not have a Vaccine Vial Monitor (VVM). It provides assurance that the vaccine has been kept at a

safe temperature. This creates a problem. It could be that the Pakistan Polio Programme will refuse to use such a vaccine. It seems that the same problem of the absence of a Vaccine Vial Monitor may also apply to the early batches of the novel oral polio vaccine type 2.

Another option is to use the monovalent oral polio vaccine type 2 for outbreak response, and the bivalent oral polio vaccine would continue to be used for routine and pre-emptive campaigns against the type 1 wild poliovirus. However, this prevents spacing of the campaigns in Pakistan and may not be suitable because of the extensive circulation of type 2 vaccine-derived outbreaks. On this sequential vaccine policy, in most places, vaccinators will be arriving every two to three weeks.

The GPEI does not seem to be considering the possibility co-administering the two vaccines. It would create challenges in explaining why two different vaccines are being administered, which may lead to misunderstandings. Also, with the two-vaccine option, the use of the monovalent oral polio vaccine for outbreaks in Pakistan could seed infection over the borders to Afghanistan and Iran.



The GPEI seems to have ruled out other strategies, for example, at an appropriate time, withdrawing trivalent oral polio vaccine and moving to a monovalent oral polio vaccine type 1. This would get vaccines containing types 2 and 3 live poliovirus out of use. A monovalent oral polio vaccine type 1 would only be used until circulation of type 1 poliovirus transmission was interrupted. Novel monovalent vaccines type 2 and type 3 would be needed for mopping up any residual polioviruses of those types. Regions and countries where there is already high inactivated polio vaccine coverage and low risks of type 1 wild poliovirus, and type 2 circulating vaccine-derived poliovirus importations, could rapidly withdraw the present use of the bivalent vaccine.

The resumption of management of outbreaks of vaccine-derived polio in Africa is equally urgent. It was clear that the pre-switch activities were not getting type 2 poliovirus immunity high enough. It has subsequently slipped further, and essential immunisation coverage has not improved to compensate.

Very intensive multi-country vaccination campaigns, using monovalent oral polio vaccine type 2 (and in due course the novel vaccine), must be conducted as soon as the COVID-19 situation in national and subnational contexts permits. There is absolutely no point having vaccine in a stockpile when there are outbreaks. Whenever these occur, Polio Programme managers should release stockpiled vaccine immediately rather than cling onto it in case there might be larger outbreaks later.

Before long, there will be calls to deliver COVID-19 vaccine in integrated programmes with polio and other essential vaccines. This will require very careful thought. When such a vaccine emerges, and hopefully is available on an equitable basis, those who need it must get it. Many countries do not have adult immunisation services, and the people who are going to be vaccinated may be the older adults, those with underlying health problems, as well as, certainly, healthcare providers, essential service workers and other adults. There are few organised programmes for them, especially in low-income countries.

If COVID-19 vaccine(s) become available this will become a very high-profile political issue because of the need to restore normality, resuscitate economies, and remove the public fear factor. There will be some desperation to use it on a population scale as soon as supplies are available.

Leaving aside the wider geopolitics of availability, affordability, prioritisation, equity and international solidarity, for polio-affected and polio-vulnerable countries, this will be a major issue. The reflex response will be to use people who are good at running vaccination campaigns. The polio field teams could get diverted into contributing to COVID-19 vaccination. This will be a further drain on the ability to implement polio programmes because they will be jeopardised for COVID-19 vaccine programmes. Getting rid of COVID-19 may be seen by governments as an imperative, with polio eradication something that can be returned to later and thus not such a priority. The GPEI needs to plan for such an eventuality to minimise the impact that vaccinating against coronavirus will have on the Polio Programme, just as it might be trying to get that momentum back after the COVID-19 pause.

COMMUNICATIONS

In its 17th report, the IMB called for sweeping change and a completely new, dynamic and comprehensive approach to communications.

In its formal response to this IMB recommendation, the GPEI described the communication strategies developed in Pakistan and Afghanistan.

The Pakistan Polio Programme is addressing the IMB's concerns with an integrated communication strategy, which includes an alliance-building and community engagement component that focuses on building a cadre of polio champions in a systematic way.

The objective is to empower the identified champions (medical, religious, traditional), provide them with appropriate training and tools and integrate them into ongoing community engagement efforts and in social media as appropriate. It is believed that this will allow them to become a sustainable community engagement resource, interacting with communities to fully address their concerns and misconceptions. It is argued that this will help to create a community environment that is supportive of polio campaigns. This strategy is being finalised by the Pakistan polio team and its implementation will be monitored.

The Afghanistan Polio Programme has developed a new regional communication and community engagement plan for the south. It believes that this will engage key influencers in a more systematic

way and ensure that they receive appropriate training and tools to support their engagement. Also, Wakil-e-Guzars, who are influential figures in urban settings, are being engaged to mobilise communities in their areas. Follow-up strategies from a meeting with them are being developed. Some mullahs in the south and east regions of the country are engaged in “refusal conversion”. Islamic Advisory Group focal persons in high-risk provinces are engaging with local religious influencers to obtain their support. They are also seeking support from the madrassas.

In its response to the IMB’s call for a new, globally coordinated communications strategy for polio, the GPEI pointed to a recently formed *Strategic Communication Working Group (SCWG)* to integrate the communication workstreams described in the recently developed *Strategy for the Response to type 2 Circulating Vaccine-Derived Poliovirus, 2020–2021*.

At the global level, the response to the idea of a fresh, comprehensive and modern approach to communications, both internal (the Polio Programme and its staff) and external seems to have been slow to get off the ground and relatively narrow in its scope.

The key GPEI communications focus currently seems to be on how to successfully “land” the complex vaccine strategy now needed to deal with wild and vaccine-derived poliovirus outbreaks and the occurrence of paralytic polio cases in a way that achieves public understanding, acceptance and avoidance of a hostile backlash.

The challenges of communication in this context are formidable, and include: a) aligning the global narrative on type 2 vaccine-derived poliovirus risks with efforts on the ground, in a supposedly polio-free Africa; b) complications of vaccine naming (i.e. *novel* oral polio vaccine) and explaining what it does and why something new is necessary; c) justifying why the vaccine is being rolled out under emergency powers rather than more formal regulatory measures; d) explaining why more than one type of vaccine is being used and why there are so many visits to communities; and e) reassurances on why some containers of oral polio vaccine are missing their usual Vaccine Vial Monitor markings.

The risk communication dimension is further complicated by the need to deal with communities’ fears of Polio Programmes being run while COVID-19 is still active.

The GPEI leadership reassured the IMB that there is research underway, involving care

providers and front-line workers, to capture the perceptions related to the appearance of a novel oral polio vaccine. This work will inform the planning processes, information and tools that will be used to roll that vaccine out. The IMB was told that the “crisis communications” perspective is also being built in and preparations are being made to respond to negative social media messages.

The IMB welcomes the amount of work that the GPEI is putting into its communications strategy for the new vaccine introduction but is concerned that the depth and complexity of the task is not being fully appreciated. It will be very important to have top quality modern communications specialists involved at strategic level, reliable sources of advice on cultural knowledge and beliefs, and strong feedback loops prepared to “speak truth to power” when things are going wrong.

More broadly, the IMB feels that the GPEI is not yet on top of the complexities of communicating in relation to the type 2 vaccine-derived poliovirus challenge.

GOVERNANCE CHANGES

In its 8th Report, published in October of 2013, the IMB made the following comment:

Any major enterprise spending \$1 billion a year with an important and clearly measurable outcome should have clear and rigorous ‘board-like’ arrangements to govern its work – including setting priorities, making considered judgements on policy (particularly those that are mission-critical), dealing swiftly with major crises and unexpected events, understanding who has overall responsibility for ensuring that delivery occurs, and securing important decisions that are widely owned and clearly communicated.

The IMB has constantly been struck by the lack of clarity in many of these aspects of accountability, governance and strategy formulation within the GPEI. Indeed, many of the comments made by senior IMB sources have a distinctly despairing and long-suffering tone on this issue.

In the same report, the IMB made a recommendation for a GPEI governance review. As a result of this, the GPEI conducted such a review, including work by external management consultants and independent advisers. The review process was led by the Bill & Melinda Gates Foundation. The GPEI was restructured as a result.

At the Polio Oversight Board held in November 2019, the polio donor countries made a statement that *inter alia* said:

[We] encourage the programme to consider its structure and governance as we enter a new phase, with different risks and additional challenges to eradication. We would welcome a review of the current governance arrangements, with the objective of ensuring we have an adaptive, politically engaged and community focused, objectively scrutinised, lesson-learning structure that can adjust to emerging challenges.

Many of the issues raised in the GPEI's 2019/2020 internal review of governance are similar to those found in the review prompted by the IMB recommendation in 2013. Some of the eight recommendations are works in progress since further reviews and planning activities will develop them further.

When 57 stakeholders were asked in a survey carried out to inform the 2019/2020 review to prioritise recommended actions, "Accountability for decisions and implementation" came out top while "Create an independent Strategy Committee Chair" was bottom.

The weakness of accountability mechanisms in the global Polio Programme is a very serious matter. The same could be said of many global health programmes. It has been a notable adverse feature of the global effort to increase essential immunisation coverage rates.

The reason that enforcing accountability for polio eradication is so difficult is to do with the inherent constitutions of the organisations involved. The goal of polio eradication was originally signed off by the World Health Assembly. Major developments and further strategies over the years have been endorsed on many occasions at World Health Assembly level. This gives them particular policy authority.

It does not, though, create a simple mechanism of accountability when performance fails, or promises are broken on deadlines or funding requirements. This has happened repeatedly over the last decade.

If a country is not meeting its polio target, there is no way for it to be held formally to account. It is not in the tradition of representatives of member states attending the World Health Assembly meetings to criticise or condemn failures in the performance of their peers. Similarly, the WHO's senior executives cannot hold an individual member state to account because they are effectively employees of the member states that

make up the organisation. That is not to say that there is no tough talking behind the scenes, nor that the regular public presentations of polio data are not uncomfortable for a poorly performing country. Unfortunately, these are informal and indirect accountability influences.

The Strategic Advisory Group of Experts (SAGE) on immunisation and the Technical Advisory Groups (TAGs) give excellent, detailed and vital technical advice to the Polio Programme but their advice is not binding. The constitution of the IMB enables it to be much more judgemental and publicly critical. This introduces a degree of accountability, albeit still not statutory.

The latest governance review does not, and cannot easily, remedy these weaknesses. It is understandable that the donor countries are deeply frustrated by this situation, and so raised their concerns in a very forceful way at the Polio Oversight Board. What it boils down to is that they are paying the GPEI to achieve immunity levels to poliovirus sufficient to stop transmission of the virus globally. The GPEI is not delivering on its side of the bargain.

The recommendation to widen the membership of the Polio Oversight Board to include two major donors, a representative from each endemic country, and possibly one or two other country representatives is an excellent idea.

The governance review's recommendation to appoint an independent chair for the GPEI's Strategy Committee seems a curious one. The perceived advantages of such a role seem to be to facilitate better and more appropriate discussions and to introduce an element of challenge (termed in the report "a Devil's advocate"). However, it could be seen as letting the GPEI's most senior management team off the hook since a chair would be at its head, but would not be accountable in any shape or form for the team's performance. It is perhaps unsurprising that stakeholders had this idea at the bottom of their list of priorities.

The Polio Programme suffers the disadvantage of many partnership-based global health programmes of not having a straightforward answer to the question: "Can you please tell me who is in charge?"

PAKISTAN.

For Pakistan, 2020 will not be the year of interrupting poliovirus circulation for good. The Polio Programme's stated aim is to make it a year of programmatic transformation and consolidation of "laser-like" focus on the super-high-risk union councils, together with establishing integrated service delivery in those marginalised communities within the core reservoirs.

Yet the epidemiological situation is extremely worrying. The outbreak of wild poliovirus in the southern part of the Khyber Pakhtunkhwa (KP) Province continues alongside the core reservoirs of Karachi and Quetta. Beyond the traditional reservoirs, transmission is expanding to previously polio-free areas.

A major outbreak of vaccine-derived poliovirus cases is also besetting Pakistan.

If no mass vaccination activities take place, there will be many more polio cases than were expected, pre-COVID-19, by the end of the year. The numbers could go into hundreds.

Pakistan Government's position. The Pakistan delegation to the 18th IMB meeting was led by the country's then Minister of Health, His Excellency Dr Zafar Mirza. He was accompanied by his senior officials, the National Emergency Operations Centre Coordinator and a representative of the Pakistan Army. Importantly, the delegation also included health ministers, senior officials, and Emergency Operations Centre coordinators from the provinces of Sindh, Punjab, Khyber Pakhtunkhwa (KP) and Baluchistan.

Dr Mirza unexpectedly left his post in the period after the IMB meeting, just as this report was being finalised. The implications of this for the management of the Pakistan Polio Programme are discussed later in the report.

The starting point for the discussion was the serious and deep-seated problems in the Pakistan Polio Programme that the IMB identified in its last report. These included four major threats to progress: the absence of political unity; dysfunctional teamwork; alienated



and mistrustful communities; and suboptimal technical performance. Obviously, the impact of the COVID-19 pandemic in Pakistan has added further complexity to addressing these challenges.

The Minister explained to the IMB that he and his team have re-defined their priorities, designated 2020 as a year of transformation for the Polio Programme in his country and agreed 2021 as the time for the full impact of this transformation. He then spoke of the response to the IMB's recommendations.

The national team has reorganised and rebuilt a "one team" approach at national and provincial levels. The Government has brought the organisation of the polio and essential immunisation programmes together in an integrated fashion. There is a feeling within the leadership of a strong team across the country that interacts effectively and has a sense of collective responsibility.

On the IMB's concerns about the politicisation of the programme, the Minister had announced, at the November 2019 Polio Oversight Board, that he would tackle this head-on by bringing all political parties and interests together for regular meetings at national level. He had received an encouraging response with engagement across all political parties during December 2019.

The Minister responded to the IMB's concern that no formal meeting of this kind had yet taken place by explaining that there had been a change in his approach to engaging with the political leadership of the parties. Instead of having big meetings, he was working with them at a more personal level "behind the scenes".

He also reiterated that there is the highest level of political commitment from the Prime Minister, from chief ministers and from the Chief of Army Staff.

On dealing with the problem of community mistrust, the Minister outlined a "three-pronged" approach.

First, to carefully listen to communities' views, including anthropological assessments. Very frank, open discussions with community members have apparently provided valuable information. A new hotline has become a point of direct engagement for the programme in the community.

Second, to engage. The Minister judged that this exercise has led to a more strategic and meaningful relationship with polio-affected communities. The programme now has sub-union council level data, and this is helping to identify "street level" issues in key urban conurbations like Karachi. Pashtun-focused engagement into local mosques has also taken place.

The third prong of this strategy to deal with community mistrust was a "perception management" initiative. A major multimedia national level programme was started in February 2020. It has a differentiated approach in selected provinces, in both official languages.

On the improvements needed to the technical performance of the programme, the Minister and his team have reviewed the microplanning processes with the help of different external consultants. They have restructured staffing, simplified tools, focused on training front-line workers (including in interpersonal communication).



Overall, the Minister felt that all these changes had resulted in nationwide campaigns, during December to February, that gave the Polio Programme in his country an opportunity to regroup and recover from what he described as the “deep dysfunction” referred to in the last IMB report.

The Minister told the IMB that the Polio Programme is now structurally in a much better place to face enormous challenges. In the early part of the year, the programme further benefited from unprecedented security support, enabling front-line workers to reach every part of the country. There was no inaccessible part.

In the second half of 2020, the Pakistan Polio Programme must deal with a dual challenge: of finding wild poliovirus and circulating vaccine-derived poliovirus, amid the most exceptional social and economic upheaval that the country is living through. The impact of COVID-19 on Pakistan’s economy and communities is very deep, and very diverse.

The Minister recognised that stopping vaccine-derived poliovirus transmission has become a new and urgent priority of the Pakistan Polio Programme in 2020. It is four years since the country stopped using trivalent oral polio vaccine.

An integrated services model of polio vaccine delivery has been implemented in seven of the 48 high-risk union councils.

The Pakistan Polio Programme’s work to more fully engage Pashtun communities is discussed in a separate section of this IMB Report.

The Minister said at the IMB meeting:

“We know if we do not respond quickly, this virus is going to go far and wide, paralysing many of our children. We have carefully analysed the challenges and the risks. We know cases will increase drastically if we do not do anything. Our data analysis is ‘scary’. This has pushed us to change our objectives. We now say that we must stop vaccine-derived poliovirus and control wild poliovirus before the end of the year.”

The Minister informed the IMB that the Polio Programme is intending to resume polio campaigns on a small scale from 20 July 2020; this has subsequently happened.

Key provinces. All the provinces in Pakistan are facing the acute challenge of COVID-19 that is disrupting their polio eradication programmes, essential immunisation, and virtually all public

services in most areas. They gave the IMB situation reports and described their plans for Polio Programme resumption.

Khyber Pakhtunkhwa Province has had persistent wild poliovirus isolations in its southern districts during 2019 and 2020, with transmission of vaccine-derived poliovirus detected initially in one district, in November 2019, and later in others. Overall the province has had widespread transmission of both wild and vaccine-derived polioviruses. In 2019, it accounted for 63% of all wild poliovirus cases in Pakistan.

While the poliovirus was isolated from all the parts of the province (central, southern and northern) in 2019, 86% were from the south and about three quarters were specifically from Bannu Division (Bannu, Lakki Marwat, North Waziristan districts). By the end of July 2020, no wild poliovirus cases had been detected outside the south of the province.

National immunisation days were conducted in December 2019 and February 2020 in all 34 districts of the province. Subnational immunisation days were conducted in five strategically selected central districts of the province. These were the first large-scale campaigns since the Peshawar April 2019 incident. This was a stage-managed and social media-fuelled event that falsely raised public panic about the safety of the vaccine (and is referred to again in the section of this report that discusses the Pashtun communities).

The polio team from the province believes that its programme was on a “winning trajectory” until the COVID-19 pandemic started. The suboptimal performance in the March 2020 subnational immunisation days and the cancellation of the April 2020 national immunisation day shows how COVID-19 has affected polio eradication activities in Khyber Pakhtunkhwa Province. This was because of COVID-19 fear among front-line workers and a shift of focus of the district administration and district health officers.

In **Punjab**, Lahore has had circulation of wild poliovirus for about 15 months. It has been a key polio-affected area many times in the past, but circulation was interrupted in 2014, 2015 and 2016. The representative of the province who attended the IMB told us that, in those days, there were many more campaigns than now. Supplementary National Immunisation Days happened every month. There were occasions when the intra-campaign gap was only 25 days.

It was difficult calling on houses so often and engendered community resistance. In Punjab today, out of 2,000 approved vaccinator posts, nearly 700 are vacant.

The Punjab team that attended the IMB meeting, stated that, compared with 2019, it felt in a slightly better position. Although essential immunisation has been weakened by the COVID-19 pandemic, it has not been completely absent. Staff were provided with protective equipment so that services could keep going.

In **Sindh**, after the initial successes in 2017 and 2018 the performance of the province went downhill in 2019. The drop has been continuing into 2020. There were only four wild poliovirus cases by 31 July 2019. So far in 2020 there have been 20 cases, 19 of which were outside Karachi (31 July data). Cases have occurred across all tiers of the district classification. The proportion of environmental positive isolates in 2019 increased to 73% and it has further increased to 85% in Karachi in 2020 (31 July data). Other divisions of Sindh are not doing any better. Key surveillance indicators meet almost all benchmarks. So, too, does the timeliness and adequacy of stool sample collection and follow up.

The number of “still missed” children is a big cause for concern, especially in Karachi where the number does not meet the national benchmark. Analysis of the reasons for “still missed” children shows that the biggest is misconception-related refusals. Between 30,000 to 40,000 children are being missed, especially in Karachi.

Since July 2019, vaccine-derived poliovirus has been isolated in environmental samples.

The COVID-19 situation in Sindh is probably the worst of the polio-affected parts of Pakistan. By early July 2020, there had been more than 46,000 reported cases in the province.

Acute flaccid paralysis surveillance has been badly hit, dropping soon after COVID-19 outbreaks started to occur. Essential immunisation coverage in the province has also been falling, down almost to the lowest possible levels in last three years.

In **Baluchistan** wild poliovirus transmission has been re-established since May 2019 in the known polio hotspots within the Quetta Block, comprising parts of Quetta City, Chaman tehsil in the Killa Abdullah district, and Pishin district. The Quetta Block is an important contributor to the southern cross-border poliovirus corridor connected with southern region of Afghanistan. With reinfection of districts in northern Sindh, the adjoining districts of Baluchistan are also affected by contiguous spread. The Quetta Block is now co-infected with vaccine-derived poliovirus.

IMB ASSESSMENT

The IMB remains deeply concerned about the prospects for polio eradication in Pakistan. There is every possibility that Pakistan will be the last place on Earth to harbour this terrible disease.

There was no doubting the commitment of Prime Minister Khan and his government. The then Health Minister Mirza spoke, at the IMB meeting, on behalf of the Government about their plans for “transformation”. The health ministers and senior officials from the four polio-affected provinces also spoke knowledgeably and authoritatively about the action needed in their cities and smaller communities. The news of Minister Mirza’s departure came as this report



was being finalised. There was no inkling of it when he attended the IMB meeting.

Some of the thinking in the more long-standing elements of the Pakistan Polio Programme leadership is that the programme was very good around 2017, and in early 2018. The argument goes that they just need to get back to that level of performance, do some fine-tuning and then run through the finishing line.

That is not the IMB assessment and it said so even in those earlier days. The Pakistan Polio Programme needs transformational change. In 2017 and 2018 it was a good control programme, but it was not an eradication programme.

GRAVE EPIDEMIOLOGICAL SITUATION AND MODELLING WARNINGS

The polio situation in Pakistan is very grave. There have been 61 wild poliovirus cases so far in 2020 (31 July data) compared to 56 by this time in 2019. The surge in vaccine-derived polio cases in Pakistan is shocking. They represented almost a third of the entire world's such cases at the end of July 2020.

The outbreak of wild poliovirus in southern Khyber Pakhtunkhwa (KP) has not stopped. In Punjab, the authorities have not even been able to stop transmission in Lahore, the main city. In Karachi, a long-standing power base of the poliovirus, the Sindh Government presides over

eight super-high-risk union councils in Karachi. Yet it has not been able to find effective medical officers to lead the polio response in those union councils.

In Baluchistan, some of the long-standing problems associated with persistent or repeated poliovirus infection are yet to be addressed comprehensively. Most notably, there are gaps in the quality of polio vaccine rounds in Quetta City. There are pockets of vaccine refusal, suboptimal operational quality and gaps in administrative control of known local anti-government elements that manipulate the security situation in Killa Abdullah. The IMB has previously drawn particular attention to Killa Abdullah. The Chaman tehsil and other parts of Killa Abdullah are intimately linked with populations in the Helmand river basin in Afghanistan, with some involved in illegal cross-border trade. Border vaccination of large numbers of children that cross the Chaman border daily is yet to be optimised. An added complexity for the Polio Programme is the inability of international staff to move and to monitor programme implementation.

Across Baluchistan, chronic under investment in health by the Government has contributed to inequities. Most Polio Programme performance indicators are at the country's lowest in parts of Baluchistan. The only reason why there is no continuous transmission in interior Baluchistan is due to its sparse population. Except for a few districts along the coast, districts in Baluchistan have some of the lowest routine immunisation coverage in Pakistan. In the short term, focused improvements in poliovirus immunity will push back on the tide of wild and vaccine-derived poliovirus circulation. However, strong



government action is required to address the deeper challenges for sustained impact.

The contribution of the new Health Minister for the Khyber Pakhtunkhwa (KP) Province, Mr Jhagra, to the IMB meeting was particularly welcome because he came to the situation afresh.

He saw a pattern of inconsistent focus over the last 20 years or so, where there are campaigns that work well for several years and then there are disruptive changes (such as in leadership) that break the momentum. The cycle of changes that happen in district leadership – whether that is the administrative head of the district, or the district health officer – results in the average tenure of such officials being about six months.

When the new minister looked at the programme's data in his province, he saw that polio is organised better and the results are getting better, but the bar is also higher. Even to fall short by 1%, 2%, or 3% does not solve the problem. He felt that the Programme needed to recognise that just doing better or even doing significantly better than routine immunisation efforts is simply not good enough.

He acknowledged that cultural factors are important, but he also made the point that the comparison of the south versus the north is not purely a cultural matter. It is also that the south is the more underdeveloped part of the province and tends to get less management attention. In the southern districts, the level of routine immunisation is also significantly lower. There is a need to have a more sustained focus on these southern districts (although, looking at the results of the last two years, it is not just a southern issue). The Minister pledged to look at every potential case and every potential failure and help the Polio Programme in his province to learn and improve as a result.

He saw the urgency to relook at communication. No matter how much communication has been debated and the Polio Programme's management thinks it is doing things differently, no change in attitudes for 20 years, means that the design of communication initiatives with communities has not been innovative or ambitious enough.

The IMB has repeatedly emphasised the importance of focusing in depth on the subnational polio-affected and polio-vulnerable areas of the country ("all polio is local"). When this perspective is taken, it is obvious that there is enormously rich local knowledge and insight

into the reasons why polio is persisting. Some areas and districts have never, or seldom, had poliovirus circulation. Others have had it in the past but successfully stopped it and sustained polio-free status over time. Still others have cleared out polio but then it has returned, while others have always had circulating poliovirus and seem unable to get rid of it. Drawing subnational political leaders, polio professionals, and local community and religious leaders into the heart of the global Polio Programme is essential. This should not be one-off attendance at meetings but a daily dialogue between these leaders, the national polio leadership and senior global and regional members of GPEI's management team.

Given the epidemiological situation, there is great urgency to resume regular polio vaccination campaigns in Pakistan. Although this began in late July, it is clear that it can only be sustained if done safely with measures to prevent transmission of the COVID-19 coronavirus: social distancing; having an adequate number of trained workers; personal protective equipment; and, also, effective communication with the communities to gain their trust.

ACHIEVING POLITICAL NEUTRALITY IN PAKISTAN

In 2019, Pakistan's Health Minister announced the establishment of a high-level National Strategic Advisory Group as part of the transformation agenda on polio eradication and essential immunisation. This group has not met.

This sent a confusing message about the government's ability and determination to create an unambiguous and non-partisan commitment to everything necessary for success in polio eradication.

The IMB heard about the Minister's rationale for developing a "behind the scenes" approach instead of operating within the national all-party group that he had originally envisaged. While he felt that this might be a more efficient and informal way of political consensus-building for polio eradication, it does not make the process and solidarity visible to the Pakistan people. Nor, does it provide accountability if promises are broken. Moreover, it is not now clear where this stands now that the Minister has left his post.

NATIONAL LEADERSHIP STRUCTURE

In relation to the overall leadership and management of the Polio Programme at national level in Pakistan, the current duality of Minister and Head of the National Emergency Operations Centre has replaced the previous a three-person team that included a Prime Minister's Focal Person for Polio Eradication.

The IMB expressed its concern to the then Minister that his heavy personal workload, in a country with the level and diversity of the Pakistan population's health needs, inevitably meant that his time for polio would be under severe pressure. That was even before the advent of the COVID-19 crisis, that is now occupying the entire time of health ministers in very many countries of the world.

If the polio eradication job is to be finished soon in Pakistan, a great deal of effort must be spent on visits to the provincial teams, to encourage them, to understand their problems and concerns and to facilitate support mechanisms. The IMB could not see how the Minister could possibly fit all this into his schedule. Yet, this high-level national presence, regularly, in the provinces is vital, particularly in the remainder of 2020 and into 2021.

The Minister did not completely dismiss the IMB's concerns, but at the same time, felt that he and Dr Rana, the National Emergency Operations Centre Coordinator, could share these national leadership functions very well. He felt that the stature of the national programme has risen in the eyes of political leaders and influencers over the last few months.

Appointing someone to the position of National Focal Person for Polio Eradication is admittedly extremely sensitive, very strategic and has not always worked well in the past. The chemistry with the Minister and the National Emergency Operations Centre Coordinator would have to be absolutely right. Dr Rana feels that he can fulfil the important elements of this wider national leadership role in support of the Minister. However, the IMB is concerned that this would take him away from the important management and technical roles that are vital for achieving excellence in the Polio Programme's delivery.

A new minister was appointed as the IMB report was going to print. The design of the leadership team will be a matter for him. However, the

workload demands, capacity and competing priorities will be the same for this new incumbent.

THE FUTURE ROLE OF THE COMMUNITY BASED VOLUNTEER PROGRAMME

The IMB is concerned about the scaling down of the Community Based Volunteer programme in Pakistan. This was a key transformation that the Pakistan Polio Programme felt had brought them to the brink of eradication.

These community health workers were able to enter the streets where the communities themselves were not willing to let anybody go and walk through. There were security challenges but the communities themselves started to provide protection. It was primarily a female workforce and able to cross the doorsteps and talk to mothers. In a city like Karachi, they were there when most needed and secured access even when there was violence and community mistrust. They were the ones who bridged the gap between community and the Polio Programme. They were offering particularly valuable inputs in super-high-risk union council areas. This was leading to important gains in performance.

The Community Based Volunteer programme was regarded as an innovative jewel in the crown of the Polio Programme in Pakistan when it was established in 2015. The interactions that the IMB independent Review Team had with Community Based Volunteers, out in Pakistan in 2018, were impressive.

During the period of surge in polio cases in 2019, serious concerns were raised about the effectiveness of the programme and its relative costs. The Polio Programme established a comprehensive review of the Community Based Volunteer programme for all areas implementing it (Sindh, Baluchistan and Khyber Pakhtunkhwa provinces).

The Community Based Volunteer programme has been the preferred approach in the core reservoir districts. There are 11 polio core reservoir districts in Pakistan: Peshawar, Khyber, Karachi (six), Quetta, Pishin and Killa Abdullah. Within these districts, the Polio Programme has designated 40 super-high-risk union councils. They have the highest risk profile for poliovirus transmission.

The community health workers who comprise the Community Based Volunteer programme are drawn from their own communities and are mainly female. They are involved in registration, vaccination and continuous tracking and vaccination of children missed during vaccine rounds, as well as the development of microplans and mobilisation of communities.

A review of the Community Based Volunteer programme during its first phase in May 2016 (before its expansion) concluded that:

CBV has successfully gained access to areas and children previously inaccessible to the polio programme and has rapidly increased the quality of polio vaccination services where consistent quality of operations were problematic.

The programme also continues to play a role in supporting non-polio activities, achieving and maintaining high essential immunisation coverage in its areas, particularly where there is persistently low coverage and underserved populations.

The recent review, carried out by the GPEI Amman Hub, published in May 2020, documented a fall-off in performance in many of the key polio indicators, and drew the following conclusion on the trend in its performance:

Results have confirmed ongoing transmission (albeit with seasonal highs and lows) – with CBV areas largely acting as the source of virus for other parts of Pakistan – throughout the period of CBV implementation. From the available SIA [Supplementary Immunisation Activity] monitoring data, for many of the CBV areas it appears that the CBV strategy hasn't overcome the existing challenges to achieving high levels of performance during SIAs that would lead to interrupting transmission.

The Review Team attributed these failures to: suboptimal government leadership, management and accountability; weak partner staff coordination at field level; and community mistrust and demand. It also pointed out the relatively high cost of the programme. The annual cost for a union council to operate a Community Based Volunteer programme is four to six times higher than other delivery modalities.

The GPEI approved a \$46 million plan in 2020 for implementation of the programme in Pakistan, which constitutes 20% of the annual budget for Pakistan. However, on the basis of its analysis of critical functions, advantages and disadvantages, the Review Team conceded that the programme's potential role in essential immunisation and integrated services for underserved communities is good value for money, provided it is implemented in selected areas.

The Review Team recommended a scaling down of the Community Based Volunteer programme footprint by 37% from 595 to 374 union councils, concentrating its work in the polio core reservoir districts and the super-high-risk union councils only. The plan calls for shifting the strategy from Community Based Volunteers to Special Mobile Teams in 89 union councils in Karachi, five union councils of Peshawar Cantonment and 127 union councils in southern areas of Khyber Pakhtunkhwa.

The alternative to the Community Based Volunteer programme is either Mobile Teams or Special Mobile Teams. This workforce is hired as waged workers during campaigns. The Special Mobile Teams benefit from increased supervision and more campaign days, as they operate in the



higher-risk union councils. Having a system dependent on waged workers can result in quality problems due to high staff turnover, as was made clear by the Transformation Review conducted in Pakistan in 2019. Even the Technical Advisory Group for Pakistan, in its latest meeting, viewed the Special Mobile Teams' approach as suboptimal due to "intermittent activity" and "deficient community engagement".

The IMB was told that former workers in the Community Based Volunteer programme have mounted protests against the provincial and national governments.

The situation is complex. In its early stages, the Community Based Volunteer programme helped to transform the performance of the Polio Programme in Pakistan. Their connections and status within poor communities was invaluable in building trust and being invited into houses where male vaccinators were denied access. The programme had wider benefits in redressing the gender balance and empowering women in some of the most conservative areas.

The programme also helped to reduce staff turnover, from approximately 30% to 7%. True, they were a relatively expensive resource, but they were contracted to work full-time, not episodically like other vaccinators. They have also been working in areas that historically reported the highest rates of transmission and mistrust from communities, so an increased amount of spending is understandable. It is clear that the programme became too big to manage, given the capability and capacity of the Polio Programme's leadership.

Did the Community Based Volunteer programme fail to perform in some areas because it was poorly managed? It certainly lacked authoritative oversight and performance management from the national level. Community health workers were not given enough time or mentorship between campaigns to improve community trust. There was no system of formal or informal feedback. As the programme expanded, it was driven wholly by data with little consideration of human-centred angles.

As these workers are local, they may want to maintain good relationships and therefore some may have succumbed to fake finger marking. It takes many rounds for Community Based Volunteer workers to learn and understand how to gain trust with communities. Over time, they gain great experience. The retention rate of staff is a symbol of good quality campaigns. It is less

easy to do this in a mobile team model of delivery. There are major risks to reducing the Community Based Volunteer programme. First, it is unlikely to be the right time to reduce the number of high-quality female workers in the face of the COVID-19 crisis when community mistrust in the programme is likely to be at an all-time high. Second, five days of waged work is not attractive to women in these highly conservative communities. The full-time salary made a great difference in being able to recruit a female workforce, as their families found this more acceptable. It has produced, and may produce more, protests against the Polio Programme. Finally, it will have a lower number of experienced, well-trained workers. Training new mobile team workers, in insecure and violent geographies, could lead to late or rushed campaigns which seriously affect campaign quality.

In areas where the Community Based Volunteer programme is no longer operating, retaining well-trained, preferably female and locally accepted waged workers is key. The Community Based Volunteer Review report, conducted by the GPEI Amman Hub, pointed out that the Polio Programme cannot maintain the Community Based Volunteer programme as it simply cannot afford to. If full-time salaries are too expensive for the programme, then other strategies should be devised to encourage the experienced workers to return, with the same drive to recruit female workers in the newly transitioned special mobile team areas.

The IMB believes that the decision to scale down should be kept under careful review. The Polio Programme in Pakistan should pay very close attention to the risks of performance failure in areas that are switching from Community Based Volunteers to Special Mobile Teams.

AFGHANISTAN.

The single most important issue for the Afghanistan Polio Programme is what can be done to restart effective vaccination programmes throughout all areas of the country as rapidly as possible.

There are multiple challenges: the widespread presence of COVID-19; circulating vaccine-derived poliovirus mainly confined to the east; a general climate of violence and insecurity; and a Taliban military order banning house-to-house and site-to-site polio activities that has been in place for more than two years.

As the pandemic started growing exponentially, following an influx of population from severely impacted Iran, on the recommendations of Polio Oversight Board, the Afghanistan government halted all polio campaigns and complementary vaccination activities in April 2020.

In the face of the growing number of COVID-19 cases, communities in Afghanistan are proving reluctant to visit, and fearful of attending health

facilities for immunisation and there are fewer community consultations in health facilities.

There has been shifts in leadership: a new Minister for Public Health (with polio experience), and new Polio Leads for UNICEF and WHO.

There have been 34 confirmed wild poliovirus cases (31 July data) in Afghanistan during 2020. Most of these were in inaccessible areas and 23 were located in the south region.

Most vaccine-derived poliovirus cases in Afghanistan have been in the east but, by the end of July 2020, one in the north east and an environmental sample in Helmand were worrying signs. Their importation from Pakistan is posing a new challenge and has the potential to cause big outbreaks including in areas inaccessible for vaccination. The south and south-east regions of Afghanistan are also under threat due to the circulation of vaccine-derived poliovirus in the bordering areas of the Khyber Pakhtunkhwa and Baluchistan provinces of Pakistan.



Afghanistan Government's position. The Afghanistan delegation to the 18th IMB meeting was led by the country's new Minister of Public Health, His Excellency Dr Ahmad Jawad Osmani.

Dr Osmani has held previous government roles including Director General for Policy and Planning. He was involved in implementation of the polio eradication programmes in the country, and in the creation of the basic package of health services.

The Minister told the IMB about the direct impact of COVID-19 on the Polio Programme in his country and the prospects and plans for resumption of polio-related activities.

During the presentations and discussions, it was acknowledged that the Polio Programme in Afghanistan has suffered major setbacks well before COVID-19. An underlying pattern of insecurity; socioeconomic deprivation; high-risk, mobile populations; poor primary health infrastructure, generally; and very low routine immunisation coverage, specifically, have all contributed to the programmatic failures.

The fragile healthcare system in Afghanistan is overstretched in coping with the demands of an ever-growing caseload of COVID-19. These are just the initial effects of the pandemic, but they already include increased morbidity and mortality due to diseases other than COVID-19. Longer-term social, economic and geopolitical effects are yet to unfold.

At the time of the IMB meeting, Afghanistan was experiencing much higher levels of COVID-19 than had been the case earlier in the year. In January 2020, there were two or three cases per day but by mid-June, about 800 were recorded, but limitations on testing capacity mean the true figure will be much higher.

No health facility or hospital was closed. All were functioning but the impact on health delivery has been major. A 22% decline in the uptake of the vaccines through the health system has occurred. There was delay in providing personal protective equipment kits to health facility staff but recently supplies seem to have improved. Over 30 doctors lost their lives in the hospitals and this generated fear among the medical providers, particularly doctors.

Over 60% of communities in Afghanistan are multiply deprived and fall under the absolute poverty line, which is defined by an income of less than \$1 per day per family. There was

quarantine over all of Afghanistan, particularly in the bigger cities and, for almost two months, people were not able to do their daily jobs. Included in the relief provided by government was the distribution of bread and this continued for more than a month.

The Minister explained to the IMB that Afghanistan mounted a multisectoral, multi-agency response to COVID-19. The United Nations (UN) is supporting the country with a "One UN" response plan; WHO is leading on this.

There are eight strands of support: a) coordination and response planning; b) risk communication and community engagement; c) surveillance, rapid response teams and case investigation; d) points of entry; e) laboratories; f) infection prevention and control; g) case management; and h) operational support and logistics.

Apart from this, the government's policy is to make maintaining and strengthening essential health services an integral part of the COVID-19 response in the country.

The country's polio team has stepped in to provide COVID-19 support, particularly in the areas of surveillance, risk communication and community mobilisation, as well as promotion of hand washing and hygiene.

All WHO surveillance staff have been trained and repurposed for combined COVID-19 and acute flaccid paralysis surveillance, across all the provinces of the country. These staff, in the past two months, have trained 35,000 members of the community surveillance network to identify and appropriately report suspected COVID-19 cases. They have also trained more than 56,000 medical and paramedical staff in sentinel sites for COVID-19. Many other activities are taking place to enhance this surge in capacity.

The Minister felt that the polio team has proved to be an asset in managing this public health emergency. He also believed that the learning from the management of COVID-19 and the role played by the polio team needs to be built into the approach for the transition of polio in the years to come.

The government is trying to maintain good surveillance with a special focus on border areas and high-risk, mobile populations. However, the number of surveillance staff infected by COVID-19, and taken out of service, has led to a 25% drop in the capacity of surveillance from January to May 2020 with the south, east, west

and north-east regions most affected. However, the Minister reassured the IMB that all the key acute flaccid paralysis surveillance indicators are still above the global and national standards.

Disruptions in sample shipment to the Regional Reference Polio Laboratory due to border closure were resolved in coordination with the Pakistan polio team. However, the stool shipment could only be sent only once weekly to the Regional Reference Laboratory. Growing infection among health workers added to the impact on routine immunisation as outreach was curtailed in many provinces; an overall drop of 30% in the number of people immunised occurred.

The strategic objectives for the Afghanistan Polio Programme in the rest of 2020 are:

- Eliminate vaccine-derived poliovirus nationally;
- Eliminate wild poliovirus from non-endemic areas and the east region;
- In the south, control or eliminate wild poliovirus if access is obtained;
- Establish a mutually agreed approach in all anti-government controlled areas to deliver polio immunisations four to five times to 90% of children under five years.

IMB ASSESSMENT

Without the unanticipated addition of a COVID-19 pandemic, the complex geopolitical, cultural, environmental and economic situation affecting Afghanistan has seriously damaged prospects of

early interruption of wild poliovirus transmission in the country.

Currently, on the epidemiological indicators alone, there is grave cause for concern. The number of wild poliovirus cases reported by the end of July 2020 had overtaken the total for the whole of last year. The speed of increase is alarming. Also, the appearance of cases of vaccine-derived poliovirus, when there were none last year, seriously worsens the country's already bad position on polio.

The IMB is unclear how the Afghanistan Polio Programme will operationalise some of the content in its National Emergency Action Plan. There is mention of removing barriers, and local-level decision-making, and looking at enhanced performance at the local level. This sounds vague and the plan does not really say how these are going to happen.

Nangarhar, where most of the vaccine-derived poliovirus cases have occurred, is considered to be one of the better performing provinces for polio campaigns and essential immunisation. It has comparatively good access. However, the poliovirus virus spreads quickly within highly mobile populations.

The risk of seeding type 2 vaccine-derived poliovirus in inaccessible areas of the country is extremely worrying, especially since there is next to no type 2 immunity. Communities surrounding those targeted with an outbreak-type monovalent oral polio vaccine type 2 can contract the virus.

The Polio Programme in Afghanistan must track typical population movements of the currently affected populations and pre-empt where they land. Many rounds of monovalent oral polio



vaccine type 2 will be necessary, beyond the typical geographically limited response to environmentally positive samples.

This takes resources and time away from combatting the wild poliovirus. If trivalent oral polio vaccine becomes available in sufficient supplies and is deployed, then campaigns can be conducted to simultaneously tackle both vaccine-derived and wild poliovirus. This all depends also on whether the vaccine-derived poliovirus moves into inaccessible areas.

ACCESS DENIED: TWO YEARS AND COUNTING

Denial of access in Afghanistan is a huge obstacle to global polio eradication. The Taliban do not want house-to-house vaccination because they do not want that kind of scrutiny in communities and villages where they may have assets.

Currently, no polio mass vaccination is allowed in anti-government controlled areas of the south, not even site-to-site.

It does not appear that this is going to change any time soon. The Afghanistan Polio Programme has sat in a semi-moribund state for two years as its model of delivery of polio drops to children has been blocked. The GPEI's answer seems to be: trust us, we are persisting with negotiations to regain access, and there will be a breakthrough.

The early post-COVID resumption of polio vaccination campaigns in Afghanistan is as urgent there as it is in other polio-affected countries. However, the impasse on accessibility remains. Many positive statements were made at the IMB meeting about the strong working relationships that had been forged during the fight against COVID-19.

The anti-government elements have been asking for help with health services. They have been seeing people suffering from COVID-19. UNICEF has opened offices in Helmand and in Kandahar, which they did not have before. This is in order to marshal a response on the ground. That does seem to be offering an opportunity to talk about immunisation and polio and provide a pathway out of the ban. There is no evidence of softening attitudes so far.

WHO and UNICEF have prepared a new framework for collaboration between the Polio

Programme and the Taliban leadership in areas that they control. A response is still awaited.

The ban on polio vaccination has two causal roots. One is, truly, a geopolitical problem, and very complex. The other is the deep mistrust of the Taliban towards the organisation implementing the Polio Programme.

Both the IMB and the Technical Advisory Group were told that there were multi-antigen campaigns conducted in inaccessible areas, yet polio was excluded.

The Technical Advisory Group suggested the programme must consider using a third party to deliver the polio vaccine in inaccessible areas. Finding a third party that is trusted by the anti-government elements and corresponding communities, that has capacity to deliver the vaccine, and would agree to take on the challenge of shifting the vaccine from the political space back into the humanitarian space will certainly be challenging. Added to this is the problem of convincing the anti-government elements to include polio drops in any multi-antigen campaign as non-negotiable.

POLARISED VIEWS ON NGOs BEING PART OF THE SOLUTION

Over the last three years, the IMB has repeatedly sought to explore the potential for the extensive non-governmental organisation (NGO)-delivered broader health programmes in Afghanistan to play a key role in combatting polio. Each time the issue has been raised, it has been met by entrenched and polarised views.

The United Nations agencies' conservative stance towards an expanded role for the NGOs delivering the Basic Package of Health Services in Afghanistan is based on critiques and evaluations that repeatedly raise concerns about conflicts of interest, ambiguous funding flows, poor performance and lack of accountability.

The view is that NGOs should not receive money for polio eradication. This is based on two assumptions: horizontal programming will not lead to enough coverage for eradication, and the NGOs' performance is below what they are already contracted to do. The GPEI would prefer to negotiate and wait for access.

In contrast, the view of some donor countries,

wider partners and some observers is to acknowledge the performance failures of NGOs but to work to improve them. This argument is based on three main points: some NGOs do get results; they can secure better access to areas controlled by anti-government elements; and they deliver a wider range of services more valued by communities than the vertical Polio Programme.

It is deeply regrettable that a stand-off in this crucial period of the eradication effort is preventing a proper exploration of a different, more sustainable approach to getting polio drops to inaccessible communities. It is ironic that, in neighbouring Pakistan, it is acknowledged that a much more integrated approach to polio eradication is essential. Yet, in Afghanistan, that would involve incorporating the delivery being through NGOs, something that has been anathema to WHO and UNICEF.

The IMB has had difficulty in getting clarity on how the large and complex administrative arrangement for health services (involving NGOs) works to gain maximum service value from the resources put in. Is it the country's Ministry of Public Health or is it the World Bank? The IMB has received a different answer dependent on whom it has asked.

Yet, to begin to consider the role of NGOs in Afghanistan's health programme strategically, a number of questions arise:

- How valid is the claim that NGOs are not paid enough money to deliver the essential immunisation?
- What is the proposal that they should contribute to polio eradication?
- Are they delivering it in vertical campaigns, or are they only giving it as an element of their essential immunisation programmes?
- What contribution to immunity is it making for polio?
- Are the NGOs able to go into anti-government controlled areas?
- Are they trusted?

HOW HEALTH SERVICES ARE ORGANISED, COMMISSIONED AND MANAGED

The delivery of healthcare and public health in Afghanistan is now organised by a project called

Sehatmandi, that started its operations in January 2019. This is a three-year, \$600 million budget project administered by the World Bank through the Afghanistan Reconstruction Trust Fund, which donors pay into, and it is implemented by the Afghanistan Ministry of Public Health. It aims to increase the utilisation and quality of health services. The major donors are USAID, the World Bank, the European Union, the Government of Canada, and Global Financing Facilities.

Sehatmandi is a continuation of a previous model of Basic Package of Health Services programme delivery in which the European Union, USAID and the World Bank supported blocks of provinces. It is similar to health programmes introduced to other post-conflict zones (such as Bosnia and Herzegovina, Cambodia, and Rwanda). The NGOs are expected to deliver service functions covering: maternal and child health (including immunisation); communicable diseases; disability and mental health; provision of essential pharmaceuticals; family planning; and nutrition.

The project supports this model of service delivery across 31 of 34 provinces. Pay-for-performance initiatives are built in. Contracts are issued to some 19 national and international NGOs. In the three provinces where NGOs are not contracted, the services are delivered by the Government.

Under the Sehatmandi project, NGOs were selected through a competitive process facilitated by the World Bank after open competition, in the hopes of bringing in new players. However, the 19 NGOs eventually contracted are from the pool that were implementing the previous delivery model. In some provinces, NGOs have changed since then.

Healthcare costs, on average, \$5 per capita. Some praise the efficiency of being able to operate at this level. Others believe this is insufficient to provide the health services that are desperately needed, and accounts for poor performance of some of the NGOs.



THE PROSPECTS FOR POLIO VACCINATION ACCESS VIA NGOs

Sehatmandi is a highly complex, tortuous structure. From the IMB's perspective, it seems that the Grants and Contracts Management Unit of the Ministry of Public Health is implementing and performance managing the contracts and memoranda of agreement, but it is the World Bank that is accountable. Purely from a donor fiduciary perspective, the money goes to the World Bank. So, in a conventional project management system, the World Bank would be accountable for achieving results. However, nothing is conventional in Afghanistan.

So, the challenge has to be how to achieve results within this context. No one seems clear how to make changes to the approach that would do that. Just because there are NGOs operating in anti-government areas does not mean they perform well enough to pin the hopes of polio eradication on them.

All polio partners agree that the Polio Programme should continue working with NGOs to improve essential immunisation coverage. However, contracting them to deliver vertical polio outreach services is more contested.

The IMB was told that, after creating a NGO coordinator position in the Emergency Operations Centre, many changes have been made. There is an accountability framework in place and the NGOs regularly report on their polio immunisation and also their efforts to strengthen routine immunisation. NGOs implement packages of services in 31 out of 34 provinces which includes all polio "hotspot" provinces. The three provinces served by the government are not polio hotspots.

A key concern of some in Afghanistan is the design of the contract. First of all, the contracts of NGOs seem to be based on a false denominator. This denominator comes from the Government's Central Statistics Office, which is almost half of the population that only is catered for by national immunisation days. So, it means that, even if an NGO is performing at 100%, they would be judged to be covering 50% of the population. In other words, the financial resource that they have is quite limited. Currently, in 16 out of 34 provinces, the NGOs are struggling, and sometimes are even unable to pay the salaries of their staff on time. Where the NGOs have the resources, then they have the capability to do more in places where the Polio Programme cannot go.

There is no NGO support in the Afghanistan polio budget and GPEI does not fund the NGO work.



NGOs' participation in polio is considered to fall outside GPEI's core budget. However, the GPEI is happy to request in-kind support from the NGOs. There are initiatives that provide funding outside the mainstream budget. In contrast, NGOs provide vehicles and people to monitor polio vaccination rounds from their own resources. In some cases, they have immunised missed children and converted polio vaccine refusal families.

There are so many complexities that there is no single, standardised way of delivering effective services within Afghanistan. It is completely dependent on the area, the districts, the communities, the organisations that are there. The starting point must be to have an open mind to different ways of working to reach communities that are inaccessible.

There are also organisations that are never talked about in polio strategy discussions. An example is the humanitarian assistance actors. They are within anti-government controlled areas and often provide life-saving assistance. They have access, they have trust that has been built within the communities and they get results. They have a wealth of knowledge and they produce reports looking at perceptions.

These humanitarian organisations may not want to engage with polio vaccination because of potential reputational damage in the communities that they serve. They may help, though, to provide deeper understanding of the underlying complexities of the situation.

Fundamentally, establishing a level of childhood immunity in Afghanistan adequate to stop transmission of both wild and vaccine-derived polioviruses boils down to addressing four questions:

- Will the relationship between the two United Nations agencies (WHO and UNICEF) and the Taliban ever be good enough to allow regular freedom of movement of the former to give polio drops to the population coverage standard required?
- Can a properly funded NGO programme be designed to deliver a high-quality Polio Programme with mentoring, supervision and technical support from the United Nations agencies?
- What is needed to gain the full support of communities in all areas of Afghanistan for the programme to eliminate polio from their country?
- Are there fundamental root causes of the poor performance on immunisation services

by some NGOs in Afghanistan (e.g. perverse financial incentives, ambiguous funding flows, inflated data returns) that are not openly discussed and are considered too politically sensitive to deal with?

TOO MANY REFUSALS IN GOVERNMENT CONTROLLED AREAS

In the midst of all the concern about inaccessibility in Afghanistan, there is substandard programmatic performance in areas where access is possible.

In Kandahar City and accessible areas, the data show that refusal is only going down very slightly. The rate of conversion of refusals has not improved: just under 80% of refusals were unresolved during the national polio campaign in February 2020. Those proportions go back over quite a long period of time. So, even though there have been intensification efforts, for example, the rationalisation of workload around Kandahar City, there is no breakthrough in performance.

Informed observers believe that, in Kandahar, refusals are influenced by the communities discussing the ban by the Taliban, and assuming that there is something legitimate to the Taliban's concerns (a "no smoke without fire" effect). This demonstrates that the ban is having both a direct and an indirect effect on access.

Integrated services have been piloted in Kandahar in an attempt to curb hardcore refusals. Broader based initiatives such as distribution of promotional items, like soap and baby blankets, have been very well received by communities.

Meanwhile, Afghanistan's social mobilisation network is being reduced from 5,000 to 3,000 social mobilisers in 25 districts in the south and east regions due to funding constraints. The programme is working to increase the number of female mobiliser vaccinators.

NIGERIA.

Nigeria has reached a huge milestone in eliminating wild poliovirus. None has been detected in the country since 2016. In June 2020, the independent Africa Regional Certification Commission for Poliomyelitis Eradication reviewed and confirmed Nigeria's wild poliovirus-free status.

Nigeria Government's position. The Nigeria delegation to the IMB meeting was led by Dr Faisal Shuaib, the Executive Director and Chief Executive Officer of the National Primary Healthcare Development Agency, which has the responsibility of coordinating and driving the polio eradication programme. He was accompanied by directors from the Federal Ministry of Health, the National Primary Healthcare Development Agency, the incident managers of the National Emergency Operations Centre for Polio Eradication. The two ministers of health, scheduled to attend the IMB meeting, were unable to attend because they were in a meeting with the President.

The IMB was told that the outbreak of COVID-19 has brought many challenges for Nigeria's health system, affecting the delivery of primary, secondary and tertiary healthcare services. There

was major public concern that anyone going to a health facility would catch COVID-19. So, on the one hand, uptake of basic services, such as immunisation, maternal and child healthcare had declined. On the other hand, some health workers would not attend to patients because they felt inadequately protected to encounter potential cases of COVID-19. Primary healthcare services have been badly affected.

Immediately after the outbreak occurred, the polio team started taking steps to try and mitigate the effects of the COVID-19 outbreak. Where they found particular weaknesses in surveillance, in supplemental immunisation activities and routine immunisation, they focused on those areas, especially in the north-east of the country. They thought creatively about what to do in primary healthcare.

The IMB was told that, even before community transmission of COVID-19 had been established, the National Primary Healthcare Development Agency had developed a preparedness and response plan for the pandemic coronavirus. They asked themselves the question: what do we do differently at the primary healthcare level



to ensure that not only do the health workers feel safe but also that patients attending primary healthcare centres see an organised system that will reduce their likelihood of catching the virus?

In the primary healthcare centres, 200,000 workers at the local government and community level were trained in how to implement infection prevention and control measures before opening the health facilities, during sessions, when delivering services, and after service delivery. Training and guidance also covered how to triage patients even before they got to the primary healthcare centres, so that those with symptoms suggestive of COVID-19 could be reviewed in a separate space. There was emphasis on maintaining routine programmes. Nevertheless, there has been a reduction in at least administrative coverage for routine immunisation, and in a number of maternal and child health activities, including family planning.

Immediately, as the pandemic developed, the Nigeria Government leveraged the polio structures to communicate with communities on what COVID-19 is and what it is not. An early virtual meeting was held with religious leaders. They, in turn, used this information in their communities. There are conspiracy theories about how COVID-19 started. The Nigeria team told the IMB that there were similar conspiracy theories spread during the Ebola outbreak in 2014. They had learned, over time, how to combat such theories with tailored communication strategies.

At a community level, polio community mobilisers have been rallied. Other community mobilisers normally used in the HIV/AIDS pandemic have also been helping in the response. All have been going from house-to-house and conveying information about COVID-19. Town announcers have been deployed to convey risk information

about COVID-19. Every sector of the society has been mobilised towards communicating information about COVID-19.

The Nigeria polio team told the IMB that COVID-19 has definitely had an impact on polio surveillance, and the disease control insights stemming from it, but surveillance activities have not stopped. Environmental surveillance has still happened. Despite control on population movement, transport of samples to the two main laboratories in Ibadan and Maiduguri has been permitted. Some information is still available in accessible areas in Borno.

Before COVID-19 struck Nigeria, the containment of the very damaging outbreaks of vaccine-derived poliovirus was a big step forward. Several lineages of this virus were found in transmission. Six have been stopped and only one was circulating prior to complete interruption. Only one case of vaccine-derived poliovirus has been reported so far in 2020. Nine other countries (Ghana, Cameroon, Côte D'Ivoire, Chad, Niger, Benin, Burkina Faso, Mali and Togo) have cases of circulating vaccine-derived poliovirus that originated in, or was seeded from, Nigeria.

IMB ASSESSMENT

Nigeria has had a large COVID-19 outbreak. The country's Polio Programme needs to recognise that, despite their very positive position on poliovirus of both kinds, this is not a time to let up. Compared to some other countries, there is no sense of a coronavirus crisis for polio, because the acute flaccid paralysis reporting has



been relatively high. However, there may not be full surveillance visibility, particularly in places like Borno. Indicators do show some evidence of weaker immunisation campaigns.

Nigeria was the first country to establish a National Emergency Operations Centre for polio. This has proved crucial in the work to eliminate the disease in their country. A change in attitude towards the vaccine-derived poliovirus has clearly occurred. It spread widely from Nigeria, caused devastation and tore into the GPEI budget.

Last year, the leadership of the National Emergency Operations Centre left Abuja, went to those states that were responsible for the outbreaks, tightened accountability mechanisms, strengthened measures at the operational level, and made sure that staff were focused on the importance of dealing with this poliovirus. Many of the operational issues were changed, and the success factors for wild poliovirus elimination were brought to bear in the vaccine-derived poliovirus campaigns. The numbers came down.

It is important for the global Polio Programme and other polio-affected and polio-vulnerable countries to learn from the experience of Nigeria. The greatly improved performance on combatting vaccine-derived poliovirus seems to be down to much more analysis of the reasons for suboptimal campaign performance, together with improving essential immunisation rates as a result of coordinated action to intensify uptake.

For example, there was an outbreak of vaccine-derived poliovirus in Anambra State. Within the state, Onitsha is a densely populated city, so

there was an expectation of a large outbreak. The virus was also found in the sewage in Onitsha. In the end, the vaccine-derived poliovirus did not break out of the borders of state. Looking at the data, this state has one of the highest levels of essential immunisation coverage in Nigeria, at over 80%. So, it does seem that work in Nigeria to strengthen essential immunisation may be starting to pay off. The water and sanitation needs of poorer communities have also been addressed.

A key priority for the Polio Programme in Nigeria is to decide how it will sustain the political momentum now that it has been certified wild poliovirus-free, yet with still a potentially unfinished agenda on circulating vaccine-derived polio that might paralyse children.

One potential threat to Nigeria continuing to strengthen its resilience and maintain polio-essential functions is loss of vital funding streams. The GPEI is very constrained for funding. It will clearly be very difficult for it to justify maintaining past levels of global funding for Nigeria, given that country does not have wild poliovirus anymore.

The response will probably be not to maintain a workforce in the country on a permanent basis but just to respond to outbreaks and to do so in a different way. The GPEI cannot prop up the same infrastructure and large teams, but Nigeria must build up the capacity to respond flexibly and faster, in an emergency setting, to vaccine-derived polioviruses that emerge. Therefore, Nigeria itself will have to find a way to maintain proper immunisation programmes and a strong outbreak-preparedness capacity. That will need to be funded by the government.

The IMB is concerned that, as the GPEI reduces its funding and human resources footprint in Nigeria, there is a big risk of the government, at federal level and state level, not being able to bridge the gap. Nigeria's funding and the health sector generally is shrinking because of falling oil prices and the pressures of COVID-19. The states will find it very difficult to make their contributions. Gavi is investing some \$200 million in essential immunisation strengthening in Nigeria over the next five years. Integrating this programme with national priorities will be important.



THE PASHTUN COMMUNITIES.

In responding to the analysis in the 17th Report showing that most paralytic polio cases are from Pashto-speaking communities, the Pakistan Polio Programme says that it has focused eradication efforts on these affected and marginalised communities.

The Pakistan National Emergency Action Plan for 2020 prioritises core reservoirs and other high-risk districts which are almost all populated by Pashtun communities. Increased focus is being given to 40 super-high-risk union councils in which almost all communities are Pashtun. The National Emergency Action Plan prioritises interventions related to transformation, community engagement and ensuring direct oversight from the provincial and national level. An integrated service delivery plan (essential immunisation, water, nutrition, sanitation, health) has also been developed for the super-high-risk union councils.

In Karachi, communication interventions specifically targeting the Pashtun communities are being implemented. The Pakistan Polio Programme is focusing on hiring Pashto-speaking front-line workers in Pashto-speaking high-risk areas. This will be tracked at the provincial and national level. Typically, one community health worker is assigned to most union councils in Karachi. In those predominantly inhabited by a Pashtun community, the programme hires two such workers, with one of the two speaking the Pashto language. In instances where the programme could not find young, literate female Pashtun workers, it hired older women who were not necessarily literate to act as guides and facilitators for the literate community health worker.

The Pakistan Polio Programme has run different listening exercises, including conducting jirgas and focus group discussions in Pashtun communities.



The Polio Programme in Pakistan has further put in place comprehensive social media listening activities and direct online engagement with communities. A polio hotline has been established for direct outreach with the community and to receive questions and complaints. The Pakistan Polio Programme has brought on board a medical anthropologist who is coordinating the investigation of the reasons for refusals in polio-affected communities with a focus on specific Pashtun sub-tribes with a high case load.

Investigations also include outreach and listening exercises with community leaders, religious leaders and other influencers, as well as the Polio Programme's own staff that directly face community resistance.

Following all this work, the Pakistan Polio Programme plans to incorporate findings and recommendations into community engagement strategies.

These are encouraging signs, but the task is not an easy one and has been tried many times in the past. Going back to 2014 and 2015, in Pakistan, there was a Pashtun-focused strategy led by UNICEF, where a high proportion of the investment on the social mobilisation, communications and behaviour change side was on Pashtun populations. Within those populations, different tribes and dialects were studied. Research was carried out into Pashtun birthing traditions to try to look for entry points to often very closed families and joint family dwellings. There was even talk among the UNICEF communications and social mobilisation teams of trying to "Pashtunise" the Polio Programme in order break through at a more fundamental level.

The wider GPEI and Pakistan Government at the time allowed the work to sit in a UNICEF silo and then it gradually withered on the vine. Perhaps it was regarded as "research" that no one knew how to translate into effective action. Perhaps it was just too difficult or unpalatable politically, given the complex relationships between successive Pakistan Governments and the Pashtuns. This inability to find a positive and decisive solution to such a fundamental barrier to eradicating polio in Pakistan is deeply frustrating. However, it is not surprising to readers of past IMB reports. Essentially, the technical, disease control paradigm has programmatic dominance.

A successful approach in a similar situation in Nigeria was based on a network analysis to understand the inter-relationships of influence and social contact. These were then mapped

to understand who the true influencers were. Interestingly, this was not always based on status or position in various chains. When these influencers were then targeted in a more intentional way, based on evidence, there was a major breakthrough in communities that were not receptive to the Polio Programme.

The Pashtun community itself is extremely heterogeneous, particularly in the regional differences that include linguistic, culinary, social, and political variations. Pakistan's 40 million Pashtuns account for nearly 20% of the country's population and share a cultural and linguistic connection with Afghanistan's Pashtun community, where they are the largest ethnic group.

The Pashtuns have divided into urban and rural societies. Major cities in Pakistan and Afghanistan are Pashtun-populated. For example, Kabul, the capital in Afghanistan, and now increasingly Islamabad, Peshawar, Quetta, Kandahar, Jalalabad. Pashtun society has been in major flux. It has a complicated relationship with northern state. Afghanistan was never historically able to completely control its territory, so there are more Pashtuns in Pakistan, but they are a minority in Pakistan, the largest ethnic minority. In comparison, although the Pashtuns in Afghanistan are not an absolute majority, they are somewhere around 50% of the population.

Pashtun culture is actually based on Pashtun wali, a code of ethics, a set of specified rules on which it has been formed. It is not in a written form and has evolved over time. Some geographical areas have tried to reorganise, some have changed, and others still have their tribal structure. Urban cultures have had a big impact on traditions. Culture is not static and has changed significantly through its interaction with politics.

The fragility of the trust between the Polio Programme and the Pashtun communities was brought into focus by events in April 2019.

The Peshawar polio incident, described in the 17th IMB report, is an example of how quickly resistance to the polio vaccine can snowball in a social media era. Peshawar is the capital city of the Khyber Pakhtunkhwa province. It is also the largest Pashtun-majority city in Pakistan. Nearly 45,000 children were rushed to hospitals across the province after rumours about hazardous polio vaccines spread across the region.

Hospitals were overrun with concerned families,

and doctors worked overtime to quell fears that, the authorities said, were stoked deliberately through social media videos. Circulated on social media, the panic was caused by a video showing children fainting and vomiting after taking the oral polio vaccine. It later turned out to be staged by a local private school teacher who made and posted the videos on social networking sites.

The incident was the largest case of mass panic around the polio vaccine in Pakistan, where suspicion of the polio vaccination programme is particularly prevalent among segments of the Pashtun population.

Misinformation enjoys a great deal of traction in all cultures. In Pakistan, there is nationwide subscription to rumours suggesting western forces or Indian interests are constantly at work to destabilise the country. It is important to understand Pashtun engagement with rumours and conspiracies around polio and immunisation not as predominantly a religio-cultural proclivity, but as tied to these political debates in Pakistan.

In high-density, low-income Pashtun areas of Karachi, politics, culture and the quality of life intersect. A suspicion of state authorities within Pashtun communities and a lack of trust in foreign-funded programmes is at its height, particularly when no other public services are

available. Pashtuns in Karachi and other parts of Pakistan see trust as a relationship that has to be earned, but it is suspicion that has become a part of their socio-political reality.

Large segments of Pashtun community in Karachi are from south and north Waziristan. The areas they live in receive few public services: clean water, electricity, and education are a luxury. These conditions reinforce doubts about the sincerity of the Polio Programme's efforts. Quite reasonably, people say that if polio spreads through filth and dirty water, then clean the water and remove the filth.

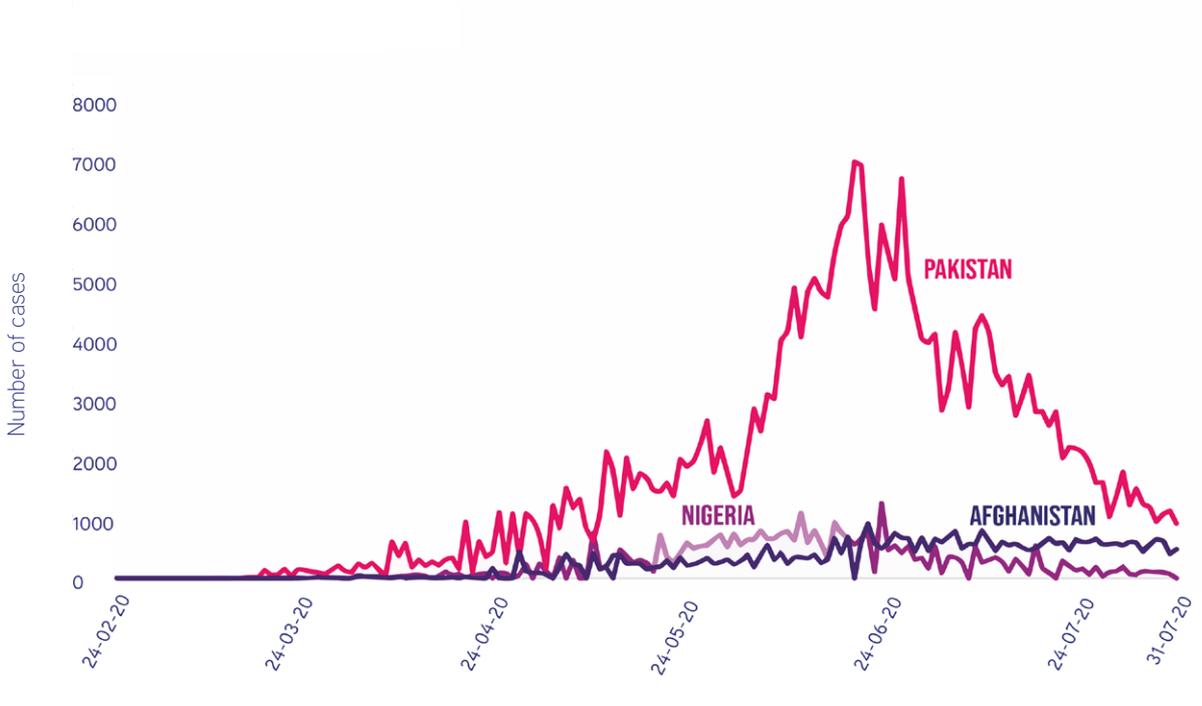
For many people living in villages in Pashtun areas, their biggest expenditure is healthcare. They spend money on going to doctors. Polio is known to be a crippling disease and many children are seen to be victims of it. People can relate to this, so rejection of the polio vaccine is not based on ignorance.

Built into the distrust is a complicated history involving Pashtuns, the Pakistani state, religion, and war. It is not simply a lack of trust in a single public health intervention: polio drops. That is just a symbol of longer and deeper source of doubt in the integrity of the supposedly humanitarian offer that is being made and the reason why its rejection is not counterintuitive at all, if seen through Pashtun eyes.



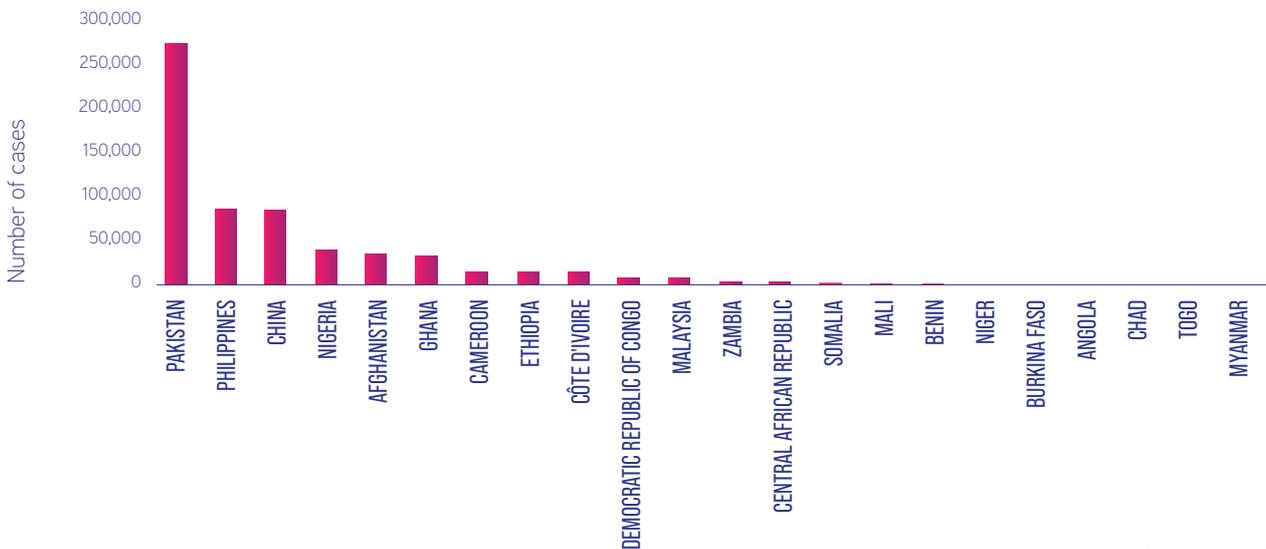
DATA INSIGHTS.

DAILY COVID-19 CASES



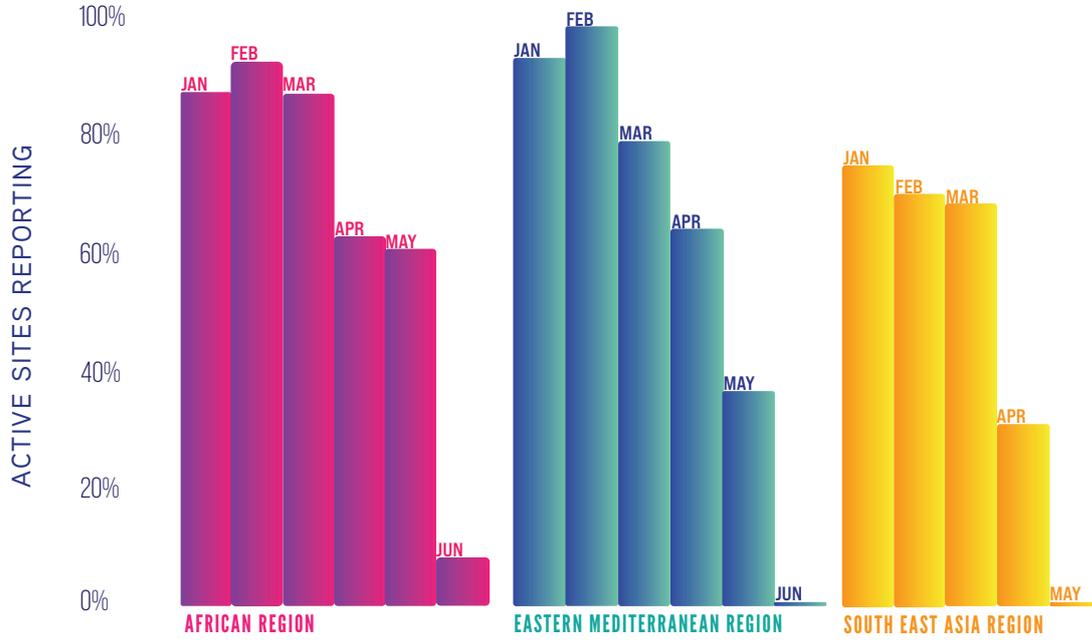
Source: WHO

IMPACT OF COVID-19 IN COUNTRIES WITH VACCINE-DERIVED POLIO, 2019 OR 2020



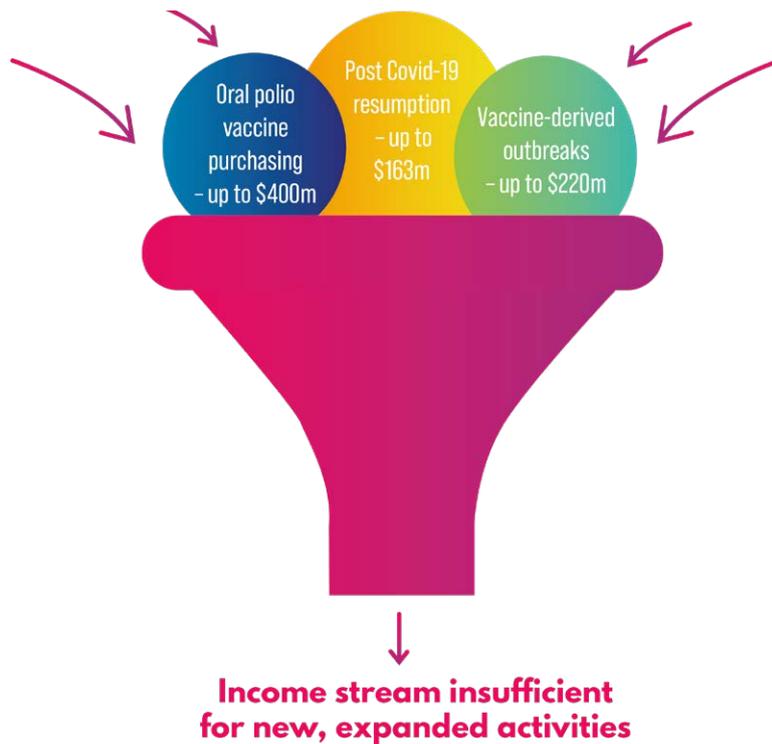
Source: WHO
31 July 2020 data

IMPACT OF COVID-19 ON ENVIRONMENTAL SURVEILLANCE



Source: GPEI
June data incomplete

GPEI HAS SERIOUS BUDGETARY SHORTFALLS, 2021 ONWARDS: WHY?



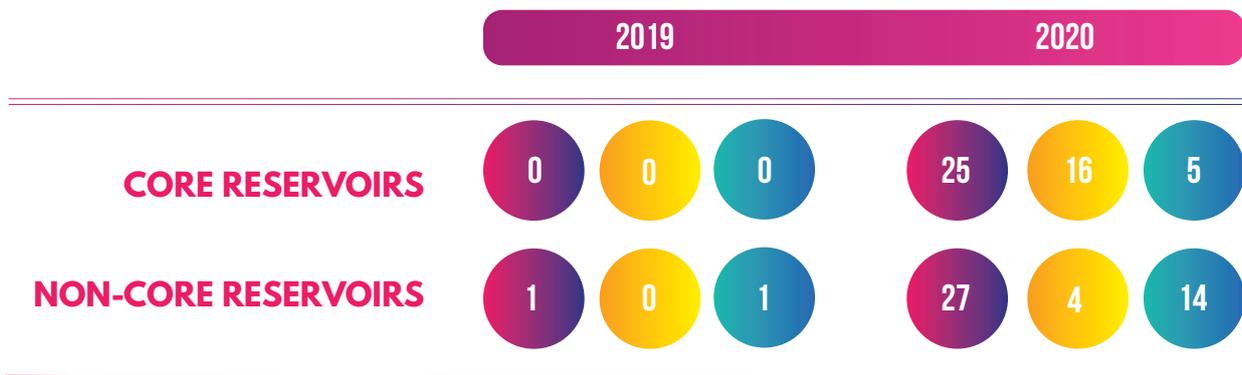
Source: GPEI

GETTING WORSE: WILD AND VACCINE-DERIVED POLIOVIRUS IN PAKISTAN

WILD POLIOVIRUS



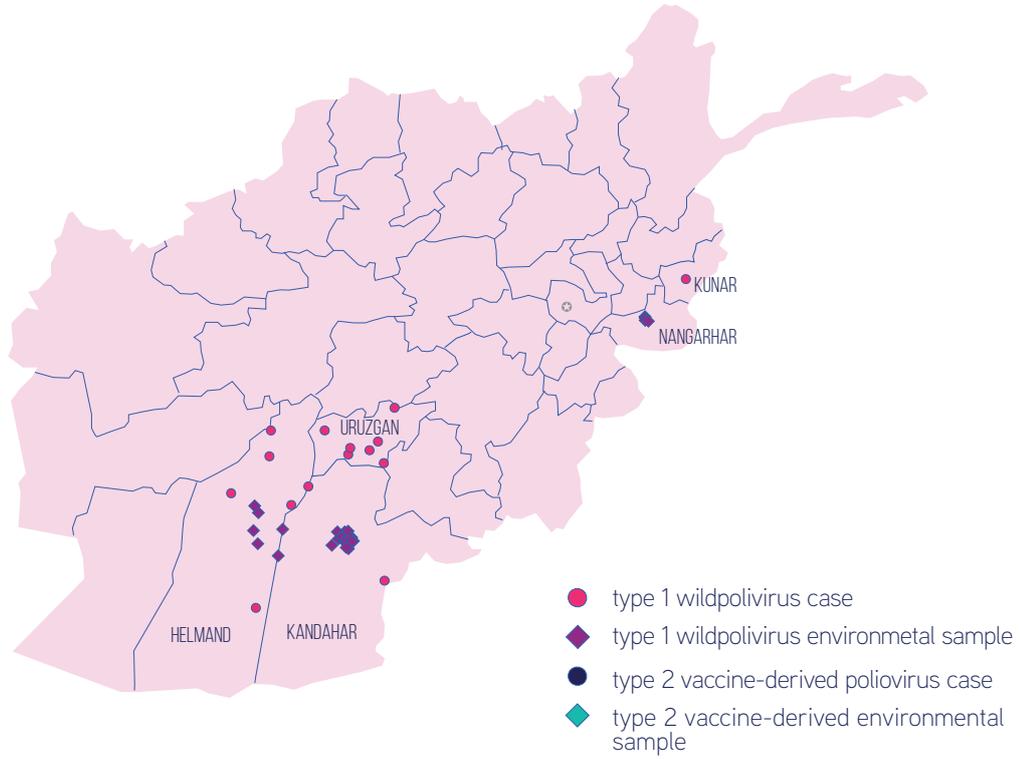
VACCINE-DERIVED POLIOVIRUS



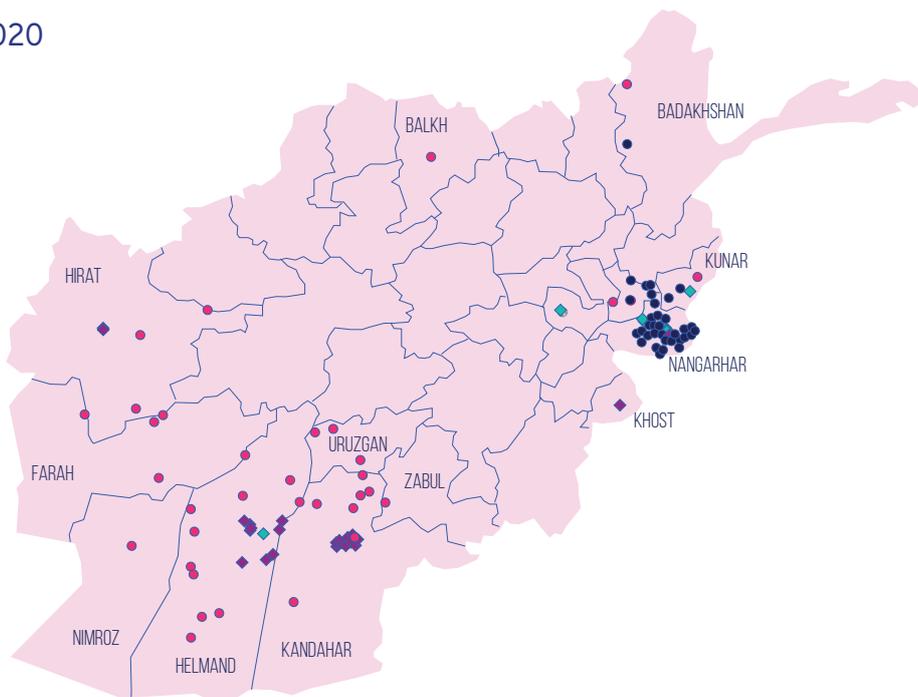
Source: GPEI
31 July 2020 data

GETTING WORSE: WILD AND VACCINE-DERIVED POLIOVIRUS IN AFGHANISTAN

JAN - JULY 2019



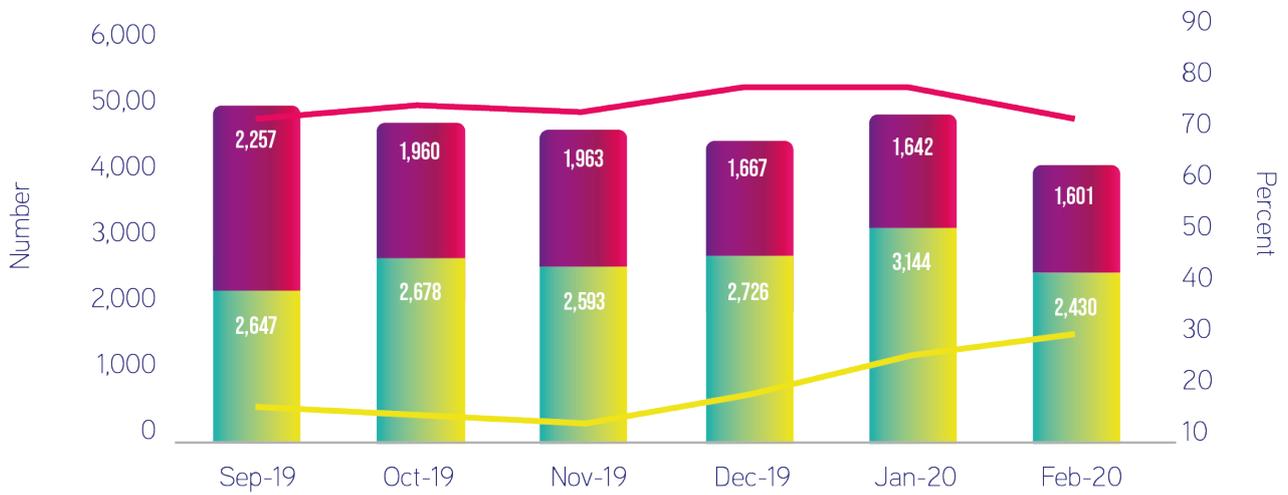
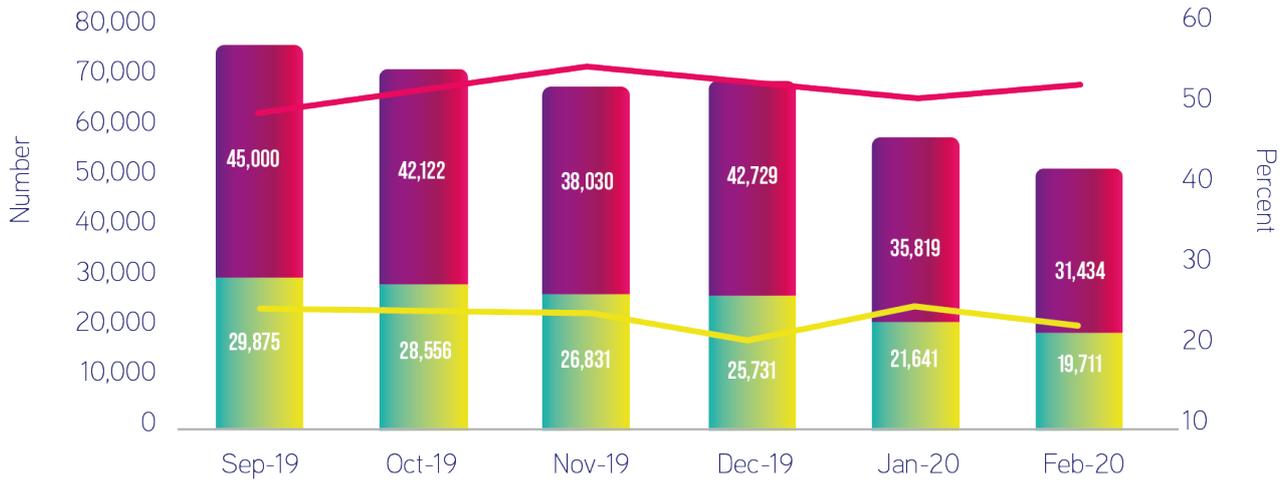
JAN - JULY 2020



Source: GPEI
31 July 2020 data

AFGHANISTAN: ACCESS GAINED, OPPORTUNITY LOST

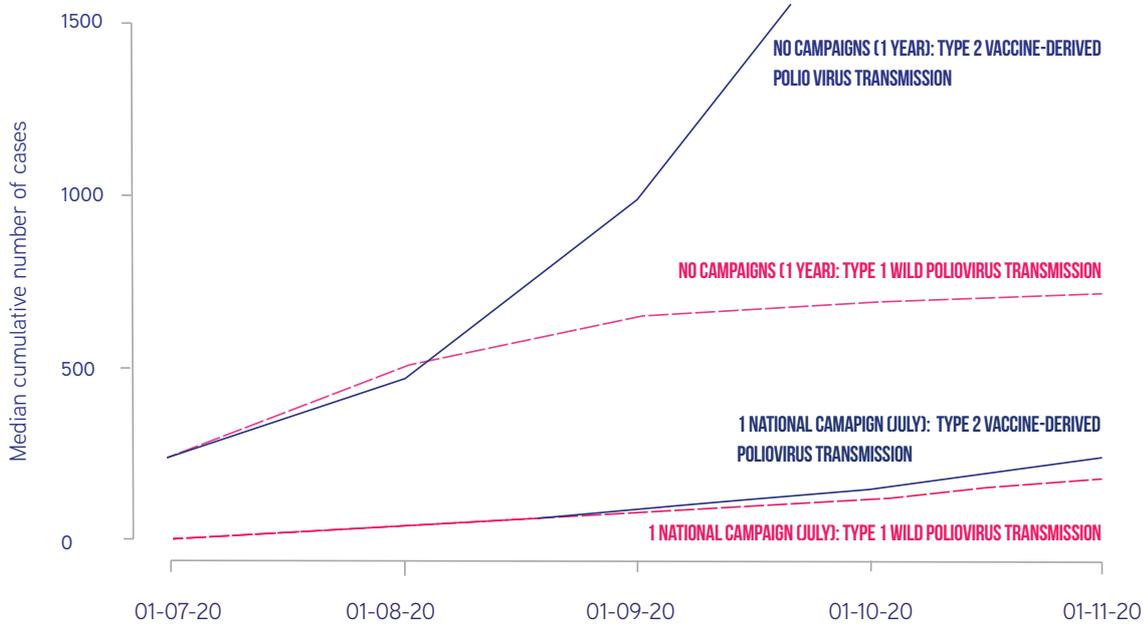
Missed children and catch-up performance



- Recovered
- Remaining
- % Absents recovered
- % Refusals recovered

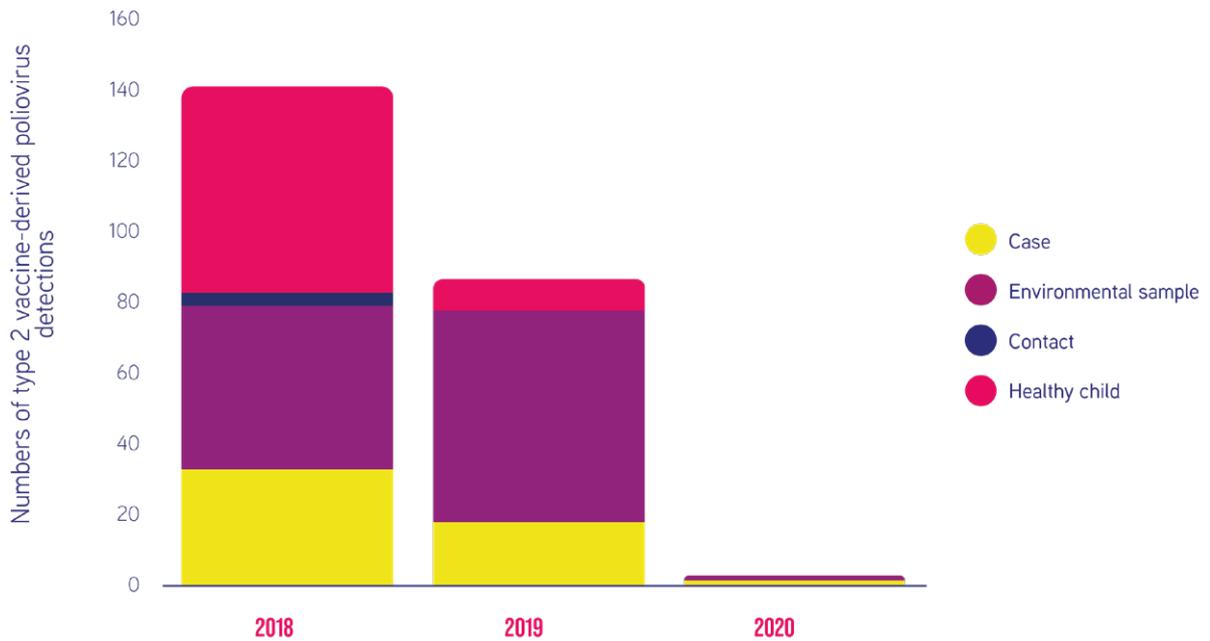
Source: GPEI

IMPACT OF COVID-19: MODELLING PREDICTIONS IF CAMPAIGNS ARE NOT RESTARTED



Source: GPEI

GETTING BETTER: CONTROL OF VACCINE-DERIVED POLIOVIRUS IN NIGERIA



Source: GPEI
31 July 2020 data

CONCLUSIONS.

It remains deeply inspiring to have a global vision of a world free of polio. It is a noble cause. It is important to many dedicated individuals currently working in the Polio Programme, and to others who have given a major part of their professional careers to the endeavour. It is a solemn reminder of front-line workers who lost their lives, and those who still do, to blind hatred for their personification of a humanitarian ideal. Ultimately, it will be a public good for all people of the world.

That vision currently seems a distant pinpoint of light. The Polio Programme is in dire straits. With a worsening epidemiological position, during 2019, for both wild and vaccine-derived poliovirus cases, the world was hit by a devastating pandemic of coronavirus. A yawning funding gap is opening up.

The Polio Programme stands in the middle of 2020 confronted by twin challenges that stand in the way of eradication. The first is the challenge of facing up to the real reasons that it went off track in 2019 into a jaw-dropping slump of performance at a time that the “almost there” narrative was believed by too many people. The

phrase now being used to encourage everyone is: “The last mile is always the most difficult”. The Polio Programme is too forgiving of itself.

The second is the challenge of making the right choice of paths, emerging from the coronavirus crisis. An oft-repeated phrase at the IMB meeting was that the COVID-19 pandemic has a “silver lining” for the polio eradication programme. What that meant to those at the meeting who referred to it, or what it should mean for everyone involved in the future delivery is less clear.

What is overwhelmingly clear, though, for the Polio Programme at country level, at regional level, and at global level is that to “keep calm and carry on” through this complex situation would be inexcusable.

The criticality of developments over the next several months for polio eradication cannot be overstated. The opportunity of COVID-19 to finally determine innovative and integrated delivery strategies provides a lifeline for polio eradication. The risk of a Polio Programme going back into the field tired and half-hearted about needing new ideas could be the death knell of



the programme. The GPEI Strategy Committee, in particular, needs to understand the gravity of the times and treat them as such.

PAKISTAN'S CARPE DIEM MOMENT

In its 1st formal report published in early 2011, the IMB said this:

Progress in Pakistan is disappointing. It was the only endemic country to show an increase in cases last year. Pakistan risks being the last to interrupt polio transmission and jeopardising the efforts of other countries to do so.

Nine years later, many within the GPEI leadership believe that COVID-19 has been the making of Pakistan in responding to a health crisis; that it even provides a whole new framework through which to push change forward. This is one of the “silver linings” that so energised some people at the IMB meeting.

Whether the Pakistan response to COVID-19 is eventually judged a success or not, at least it seems to have resulted in a full and dynamic national engagement with public health aspects of the emergency. Many of the things that have been done (e.g. more advanced use of monitoring methods, geographic information system technology, spatial mapping) have raised their game. They have ensured that people and organisations work together.



The COVID-19 crisis has had a very high level of political commitment. For example, the National Disaster Management Authority has been engaged in the fight against the disease.

This is particularly ironic, given the recommendation in the 10th IMB report published in October 2014 – another moment when the Pakistan Polio Programme was in crisis:

That the Prime Minister and Cabinet of Pakistan order the National Disaster Management Authority to take on the task of stopping polio in Pakistan, with immediate effect.

This recommendation was met with a stinging rejection and the IMB was told that it was: “Wild and woolly thinking”.

The questions are:

1. Can the approach to polio eradication in Pakistan be “elevated” to the same degree as its COVID-19 response?
2. Can Pakistan instil the same sense of “national emergency” for polio that has never really been there before?
3. How does the Government of Pakistan react to what is being said of them i.e. “If they can pull out all the stops for COVID-19, doesn’t it demonstrate that they weren’t pulling out all of the stops for polio?”
4. Will Pakistan really capitalise and learn lessons?

Taken together the “transformation” measures that Pakistan had already mapped out and started to implement before the pandemic and the new emergency mode of delivery during COVID-19, Pakistan has a chance. There is a new impetus for change and for rapid progress to be made. If that does not happen in the next six months, if those changes do not get rolling, the wheels will come off the Pakistan bus. The situation for Polio Programme leadership at all levels could not be one of higher pressure.

Crucial policy decisions and action is required to: strengthen national leadership and sustain cross-party political support for polio eradication; resume COVID-19-assured polio programmes at scale; build integrated models of oral polio vaccine delivery; rapidly extinguish vaccine-derived poliovirus outbreaks; listen and build strong and positive relationships with polio-affected and polio-vulnerable communities, based partly on tangible improvements in their infrastructure, utilities and health facilities; raise levels of population immunity to all vaccine-preventable

disease; form a special and political relationship with a broad base of Pashtun leaders.

THE SAFETY OF CHILDREN ACROSS AFRICA AND BEYOND DEPENDS ON NIGERIA'S POLIO RESILIENCE

Nigeria's achievement on certified removal of wild poliovirus is immense. It is an exciting moment for the whole Polio Programme. The country has also been successful in interrupting the circulation of type 2 vaccine-derived poliovirus, but it did take them two and a half years to deal with that outbreak. Also, success came at a cost of a large number of campaigns and was expensive.

The risks of vaccine-derived poliovirus have not gone away. There are still areas with potential risks. Sokoto is an area where coverage is very low. If there is risk for Nigeria, then there is risk for other parts of Africa and countries beyond even there. Many outbreaks in other countries during 2019 have emerged from the Jigawa poliovirus lineage or from the Sokoto lineage.

Everything turns on Nigeria's ability to continue to build and sustain a high level of polio resilience.

Stopping polio is difficult, as Nigeria well knows. Keeping polio from coming back for years ahead is equally difficult, as not everyone in Nigeria may know. Polio must not become "out of sight, out of mind". Political commitment at national and regional level must remain high. The best public health leaders must be encouraged to stay with the Polio Programme, rather than depart for pastures new in a spirit of "job done".

The Nigeria Government itself must find a way to build: high quality immunisation programmes, polio surveillance that is second to none and proper outbreak preparedness capacity. They would benefit from partnering with India to understand how that country has maintained resilience for so many years after interrupting poliovirus transmission.

Money will be a big challenge. As the GPEI moves on and is unable to maintain the same level of funding, there is a huge risk of the Nigeria Government being unable to pick it up, either at the state level or the federal level.

The clear strategic direction for Nigeria turns on

the broader health questions of strengthening primary healthcare and accelerating progress towards Universal Health Coverage. This seems to have momentum and the fruits of this investment are beginning to show. It will have a big impact on maintaining the polio achievements that Nigeria has made but, as in other countries, COVID-19 has blocked progress. It is important that this slowdown does not become a major disruptive force hindering the good work that has been carried out and is scheduled in the months ahead.

NGOs AND POLIO IN AFGHANISTAN: TO BE OR NOT TO BE

It has become apparent that the Polio Programme in Afghanistan currently has no hope of stopping wild poliovirus circulation in the near future. It seems to have two short-term aims: to contain the spread of circulating vaccine-derived poliovirus, and to clear the non-core reservoirs of wild poliovirus.

The Afghanistan Polio Programme is starting to look like a containment initiative, not an eradication endeavour. There are no solutions in sight to improve access in areas controlled by anti-government elements.

The question as to whether the system of planning, funding and delivering public health and healthcare, designed for the majority of the population of Afghanistan, can be trusted to deliver the simplest of any health intervention – polio drops – rumbles on from IMB meeting to IMB meeting. No one can agree.

The United Nations agencies do not support the idea of the NGOs taking on the task of polio vaccination in any large-scale way. They believe that their programme should operate separately. They do not have confidence in the NGOs to deliver successfully. Some donor countries and wider polio partners say that using the system that is there for everything but polio, is a card that should be played in the fight to eradicate the disease in this poor and conflict-riven country.

The bottom line is that there is no "Plan B" for interrupting transmission of wild or vaccine-derived poliovirus in Afghanistan. The country's Polio Programme and the GPEI's representatives are sitting on a powder keg of low polio immunity that could surge into explosive outbreaks of both forms of the virus.

It does seem odd that the polio feasibility narrative should rule out the route through which most health services are delivered in Afghanistan.

The NGOs have often performed poorly on essential immunisation coverage and achieving outreach in the difficult areas. The scepticism about deploying them in the mainstream of polio eradication is understandable. There are also serious concerns about the integrity of funding mechanisms and data returns. However, they are the main system for delivering public health services in the country. Surely, there must be a way to make them effective and ensure they are properly managed.

THE SHAPE OF THE POLIO PROGRAMME AFTER COVID-19

About three years ago, before the surge of wild polioviruses in Pakistan, the widespread vaccine-derived poliovirus outbreaks, and the inaccessibility in Afghanistan, the GPEI thinking was very much to push harder and squeeze tighter using the full power of the vertical programme structures to complete the job of interrupting transmission. When the IMB raised questions about a wider approach, there was little interest in departing from this core strategy.

Then came the tumultuous events of 2019, when it became obvious that the whole approach had virtually imploded. It was very clear that the GPEI was really struggling to adapt to the major change that many saw as overdue. This included a really big policy decision about whether, in this last phase, to pull back from the vertical programme approach, with possibly a few exceptions.

At the recent IMB meeting, frequent mention was made of the benefits of the COVID-19-imposed lockdown in creating unexpected thinking time for the Polio Programme's global, regional, provincial and district leadership. The IMB was told that there had been reflection and extensive discussion on the reasons for the serious programmatic failures of the last year. There was also the opportunity to look forward to the exit from the lockdown.

The IMB hoped that the Polio Programme leadership would reach a "Eureka moment" when it realised that polio would not be eradicated unless it based its approach not just on the views of communities, but their needs and feelings too.

Throughout its lifetime, the IMB has sought to encourage the Polio Programme to use local knowledge and insights as well as communities' deeper interests to shape its work. It has strongly advocated creativity and innovative use of data to solve problems. Such a programmatic culture has been agonisingly slow to take root.



Indeed, the IMB's regular sojourns away from epidemiological and technical territory has at times seemed to bemuse and befuddle sections of the GPEI leadership. It has been thought of as "communications" and parcelled off for UNICEF to deal with.

A lesson from polio control over the last 30 years is the need to put communities first. Whether it is in parts of Pakistan, Afghanistan, northern Nigeria, Somalia or the Democratic Republic of Congo, many communities were struggling even before COVID-19. They are still struggling with insecurity and a lack of basic services, including water – and not only water to wash hands, but water to drink. So, when talking about such communities and going to them, it is vital to take their context into consideration. Service provision must be relevant to them and polio activities tailored to them. That is how is to build trust, and how communities are "mobilised" to actually be receptive to the Polio Programme's services.

Yet, progress in the targeted action, agreed in 2018, to boost infrastructure, services and quality of life in the most deprived communities in Pakistan and Afghanistan has been painfully slow. There are plans, but potentially transformative benefits for polio eradication in these endemic countries have not been realised. The IMB was told that many of the services in the Polio Sub-package in Pakistan and the Integrated Services Delivery Plan in Afghanistan are beyond the management, staffing and funding capacity of the Polio Programmes in the two countries.

It seems that, because the GPEI is not using core polio resources for the initiative, it is not, therefore, actively managing it in the same way that core-funded areas of the programme are driven forward. Between, and even within, agencies, there does not seem to be a unified view on how important this work is. So, there is no clear global, external mechanism that will now ensure that both countries rapidly implement their plans. Nor does there appear to be accountability to the GPEI (or any other organisation) to do so.

The GPEI cannot have one foot in this vitally important programme and one foot out. That means much more hands-on leadership to make it happen. It needs a rapid, energised and winning trajectory as a matter of urgency. It also necessitates finding other programmes and development partners to step in. This will not occur either unless the GPEI's most senior leaders take full responsibility for doing this.

This is all inextricably linked to programme design. A vertical Polio Programme, giving only polio drops to children, has surely had its day. In many areas of Pakistan and Afghanistan, most at risk from polio, there is hostility to the Polio Programme. Parents do not understand the need for so many knocks on the door. They see rejection of the vaccine as a way to protest against the lack of basic services and infrastructure in their communities. Implementing the recently developed basic package of water, sanitation, hygiene and health services should now be a priority both for polio and the COVID-19 response. After being battered by COVID-19, these communities are likely to see polio drops as an irrelevance to their daily lives.

Embedding polio drops within wider service delivery programmes needed and wanted by poor communities is not incompatible with the recognition that a vertically delivered programme removed most of the burden of polio from the world. It is not a betrayal of the principles on which the polio eradication programme was supposedly founded. It is just a wise adaptation to a very different context.

The Polio Programme can continue to chip away at community engagement, using the same old methods, but if it cannot deliver something that looks fundamentally different then it will not get over the finishing line of polio eradication.

The polio-drops-only approach should now be used only in circumstances where it is fully embraced by communities. Otherwise, the polio vaccine delivery paradigm should be integration, not just in the endemic countries but beyond.

THE MOST COMPLEX SET OF VACCINE DECISIONS IN HISTORY

The Polio Programme enters the second half of 2020 and then 2021 with surely the biggest set of policy decisions and strategic actions on vaccines and vaccination ever faced by a global health programme.

The most obvious is the urgent need to resume polio vaccination in the constrained context of COVID-19 precautions and how to do so.

Beyond that, the Polio Programme faces the short- and medium-term future with six vaccines that could be deployed: the current bivalent oral

polio vaccine (used to interrupt circulation of type 1 wild poliovirus); the current monovalent oral polio vaccine type 2 (used to combat outbreaks but causing others); a novel monovalent oral polio vaccine type 2 (designed not to produce transmissible poliovirus); the trivalent oral polio vaccine (phased out in 2016 to eliminate type 2 poliovirus); the inactivated polio vaccine (the replacement for the oral vaccine in situations where the poliovirus is no longer circulating); the forthcoming vaccine(s) to protect against COVID-19 (which will be relevant to aspects of the Polio Programme if and when available).

The availability of the vaccines; managing stocks; the ability to supply them rapidly over a wide range of geographies; decisions and choices on which to use; monitoring impact and adverse reactions; and handling both public information and internal communications will place unprecedented pressures on the Polio Programme.

The GPEI has reached the conclusion that it cannot control vaccine-derived poliovirus with the currently available technology and so the introduction of the entirely new monovalent oral polio vaccine type 2 with the attendant logistics, communication, targeted surveillance and monitoring is a huge project in its own right.

It is important that the GPEI leadership realises that this is unlike the implementation of its last major policy decision, the global “switch” from trivalent to bivalent polio vaccine in 2016. That was carried out very efficiently, but it was a roll out. The present situation is not a roll out. It is a real-time series of complex interventions across a wide geographical area requiring accurate data, excellent soft intelligence and feedback, as well as numerous fine judgements. It will be happening in a pressurised environment with a higher than usual level of public scrutiny.



NATIONAL LEADERSHIP ARRANGEMENTS IN PAKISTAN AND AFGHANISTAN

The Pakistan and Afghanistan delegations to the IMB were led by their respective health ministers who described in detail the situation in their countries. They engaged in an extensive discussion with the IMB. As this report was being finalised, the Pakistan minister left his post.

The Pakistan Government’s national polio leadership structure no longer contains a national Polio Focal Person, as it has in the past. The national leadership comprises the Health Minister and the National Emergency Operations Centre Coordinator. This is considered to work well.

However, COVID-19 has become an all-consuming priority and this has added huge extra demand to the health minister role. The National Emergency Operations Centre Coordinator also has national responsibility for the essential immunisation programme. The polio-related leadership capacity of both postholders will inevitably be scarcer than it was a year ago.

To get the Polio Programme in Pakistan to eradication standard is a difficult and complex task requiring many streams of action. Strong effective coordination based on face to face contact, visits and meetings is vital. It needs good and regular dialogue with a wide range of people and organisations, including: members of political parties; provincial ministers, secretaries and teams; religious leaders; community representatives; and NGOs. One solution to these needs, and the capacity to meet them, is to revert to the previous arrangement and appoint a new national Polio Focal Person. If this is the way forward, it will be essential to pick the right person so that team dynamics at the top are positive and cohesive.

The IMB has expressed concern about the leadership arrangements at national level in Afghanistan on a number of occasions. In its 16th report it said:

At the top level of the Afghanistan’s Polio Programme, the government and the United Nations agencies need to redesign the governance and leadership structure so that it is effective and free of dysfunction and internal power plays.

There is currently a National Emergency Operations Centre Coordinator and a National

Polio Focal Person who acts as the Minister's senior adviser. It is essential that these two individuals work well together and that their respective roles are crystal clear to everyone working in the Polio Programme. This is vital for coordination as well as accountability. There is also a separate head of the essential immunisation programme. It is vital in endemic countries to have no element of uncertainty in national leadership arrangements. The IMB will give major focus to leadership at its next meeting with the Afghanistan Government.

It is a particularly bad time to lose a national political leader in a remaining endemic country. It is to be hoped that new and effective arrangements are made as a matter of urgency.

THE FIGHTBACK STARTS HERE

There was a poignant moment in the IMB meeting, when the Nigeria polio team were being pressed to explain how they had finally got on top of the vaccine-derived poliovirus outbreaks in their country. They explained all the technical measures that had been taken, including the intensification of campaigns. The discussion paused. Then Faisal Shuaib, the head of the Nigeria delegation to the IMB asked if there was time for him to speak about one particular meeting.

He told us that it was an evening when the incident manager, the deputy incident manager and all of the members of the Emergency Operations Centre were together.

They finished their meeting and looked around at each other. Someone broke the silence and said: "We are better than this. We cannot allow this virus to paralyse our children and the children of our brothers and sisters across the world". That is when their fightback began, against yet another dimension of the challenge to create a polio-free world.

At this complex and difficult moment for the Polio Programme at global, at national, at regional and at community level, inspiration has come from the teamwork, the dissolution of silos, and the warm solidarity as everyone has come together to protect communities and save lives from the effects of the worst pandemic in a hundred years. Infused by that spirit, the Polio Programme must now put petty differences aside, think big ideas, turn towards the light and begin the fightback to earn the right to stand on the path to polio eradication once again.

At the end of a long day of IMB videoconferences, when the farewells had been said to people in time zones across the world, and the screens had been clicked shut, five words stayed in the memory:

"WE ARE BETTER THAN THIS".



RECOMMENDED ACTION.

BUILD A TRULY POLIO-RESILIENT NIGERIA.

- 1.** The GPEI spearheading partners, the Nigeria government at federal and state level, donor countries and the Aliko Dangote Foundation should meet urgently to formulate a funding strategy to ensure that the country stays free of wild and vaccine-derived polioviruses and achieves sustainable high levels of essential immunisation coverage.

***Rationale:** With the unprecedented scale of vaccine-derived poliovirus outbreaks, and the uncertainty about the impact of COVID-19 in polio-affected and polio-vulnerable countries, Nigeria holds one of the keys to global polio eradication. Given its wild poliovirus-free status, and its control of vaccine-derived poliovirus outbreaks, any loss of strength of political leadership, failure to make rapid progress on essential immunisation, major reductions in funding, or shortfall in high standards of surveillance could be disastrous and very costly – not just for Nigeria, but for the rest of Africa and beyond.*

SECURE, SUSTAIN AND MAKE TRANSPARENT ALL-PARTY SUPPORT FOR POLIO ERADICATION THROUGHOUT PAKISTAN.

- 2.** The Pakistan federal Government should use its full political influence and oversight to ensure all-party and institutional support for polio eradication at each governance level in the country; it should institute regular meetings of the National Strategic Advisory Group for Polio Eradication and Immunisation in Pakistan, as was intended when it was established in 2019.

***Rationale:** It is vital that the Pakistan government at national, provincial and community level consistently promotes an all-party, all-of-government, all-of-society approach every step of the way, as other successful nations have done. Political unity behind the Polio Programme is essential. The federal Government's ability to create an unambiguous and non-partisan commitment to everything necessary to eradicate polio is critical for success. In response to IMB concerns about the lack of political solidarity and the absence of neutrality contributing to Pakistan's polio resurgence. The Government announced, at the end of 2019, an all-party National Strategic Advisory Group to drive progress on polio eradication. This important body has not met. Without it, there is no public visibility to the political unanimity and accountability of support for polio eradication.*

STRENGTHEN NATIONAL LEADERSHIP CAPACITY IN PAKISTAN.

3. Appoint a new, carefully chosen national polio leadership team, particularly in the light of the additional pressures of the coronavirus pandemic.

Rationale: At the time of the IMB meeting, the national leadership team comprised the Health Minister and the National Emergency Centre Coordinator. The GPEI leadership and the Health Minister considered that this was working well. The Pakistan Government's national polio leadership structure no longer contains a national Polio Focal Person. Since the IMB meeting, the Health Minister has left his post.

The burden of being compelled to make COVID-19 a priority is consuming the time of all health ministers around the world. Also, in Pakistan, the National Emergency Operations Centre Coordinator has taken on the national leadership of the essential immunisation programme.

Strong, effective coordination based on face to face contact, visits to different parts of the country and frequent meetings is vital. It needs respectful listening to a wide range of people and organisations. Even before COVID-19, the polio time of both national leadership incumbents was at a premium

The IMB advises that the appointment of a new Health Minister should be closely followed by that of a new national Polio Focal Person or other arrangement to ensure that there is high-level, full-time attention to the critical issue of eradication, and that such an individual can be identified and empowered. The choice of person is crucial since the skill sets and chemistry needs to be well matched with the new Health Minister and the National Emergency Operations Centre Coordinator.

MOVE FORWARD RAPIDLY WITH THE AGREED REGENERATION PROGRAMME FOR MULTIPLY-DEPRIVED AND ALIENATED COMMUNITIES IN AFGHANISTAN AND PAKISTAN.

4. Implement urgently the targeted action required to improve community infrastructure and quality of life through water, sanitation, hygiene, and basic service provision that was agreed as policy in 2018; identify funding gaps and bridge them quickly.

Rationale: The 16th and 17th IMB reports made strong recommendations about the transformational potential for polio eradication if water, sanitation, hygiene and basic health services were given to poor, marginalised, and alienated communities in Pakistan and Afghanistan. The Polio Oversight Board endorsed action in 2018.

The GPEI and the respective governments have been very slow to address this critical gap. Afghanistan and Pakistan have now both developed a detailed specification of what services need to be provided, and now need an implementation focus, with accountability.

Rapid action is required and the GPEI should provide the global leadership required to engage development partners, rapidly mobilise resources, and assume accountability for delivering results. The GPEI cannot have one foot in and one foot out of this potentially game-changing initiative.

CREATE STRONG A COOPERATIVE RELATIONSHIP OF MUTUAL TRUST WITH THE PASHTUN PEOPLE AT A POLITICAL LEVEL.

- 5. The Pakistan federal Government and provincial administrations, working together, should build a strong political relationship with representatives of the Pashtun communities in the country with the aim of establishing Pashtun-led eradication of polio in Pashtun communities.**

Rationale: A key to achieving a major breakthrough in polio eradication in Pakistan is the willingness of Pashtun communities across the country to embrace the benefits of polio vaccination for their children. Failure to achieve this has been a problem for 20 years. Innovative approaches based on interviewing communities and research studies have been tried before but have not achieved that breakthrough.

Nigeria's experience of analysing networks of influence and contact offers a methodological innovation. A Pashtun strategy cannot be looked at only geographically. It is not purely about focusing on super-high-risk union councils, for example. That is important but it will not win the hearts of Pashtuns as a collective group.

The work currently being undertaken at the cultural, social, and religious level is good and important. It needs a much bigger additional card to be played. A positive and cooperative political relationship has to be forged with Pashtun leadership if eradication-standard Polio Programmes are to be established in their communities. This will require political courage, given the history of tensions and mistrust between successive Pakistan governments and the Pashtun communities. If it can be achieved, it will bring a sea change in the success of the Polio Programme in Pakistan.

BE AWARE OF THE RISKS OF CHANGES IN THE COMMUNITY BASED VOLUNTEER PROGRAMME.

- 6. The GPEI leadership and the Pakistan Polio Programme should be prepared to adapt the Community Based Volunteer programme, which continues to have major potential to increase vaccine coverage.**

Rationale: The decision to cut back on the Community Based Volunteer programme has been made at a critical time, when the Polio Programme will need the highest degree of support from local communities in its early post-COVID-19 campaigns.

The programme was initially transformative and inclusive in that female vaccinators and social mobilisers were drawn from the polio-affected communities themselves. The leadership of the Polio Programme, globally, nationally, and locally should monitor, at granular level, vaccine refusal rates using real-time data capture. They should be prepared to change the policy if it is seriously threatening performance. Above all, any replacement scheme that cannot get female vaccinators and social mobilisers into the houses will flounder. Community Based Volunteers could also become an integral part in broader essential immunisation and primary care services.

MANAGE EFFECTIVELY THE ONGOING PRESENCE OF COVID-19, WITH RESUMPTION OF POLIO VACCINATION.

7. The GPEI should work with the leadership of the country Polio Programmes to produce, and regularly update, comprehensive plans to deliver safe and effective campaigns; also, they should create a decision-making framework to guide national and local teams on how to make rapid judgements on the extent to which polio staff should be repurposed again in the event of second and third waves of COVID-19 or pockets of resurgence.

Rationale: It is critical to ensure early resumption of polio vaccination campaigns in the COVID-19 context. This is vital in Pakistan and Afghanistan, where modelling data indicate the dire consequences of not doing so. For the last three or four months, most polio staff in key areas have been redeployed to mount a response, at population level, to COVID-19. Many are now starting to go back to running resumed polio campaigns.

Comprehensive plans are essential to ensure effective and sustainable campaigns and for adopting public health measures for the safety of children and families and the health workforce. If COVID-19 comes back forcefully in certain areas, polio staff will not be able to maintain a dual role. It will be vital to have ground rules for national and local Polio Programme leaders and managers on how to make decisions about sustaining resumed polio work or switching back to fighting COVID-19.

STRENGTHEN COVID-19 MANAGEMENT EXPERTISE IN ALL EMERGENCY OPERATIONS CENTRES.

8. Appoint, or second-in, specialists in infection prevention and control and specialists in supply logistics to each national and regional Emergency Operations Centre.

Rationale: In a resumed programme of polio vaccination, daily judgements, decisions, guidance issuing, question answering and troubleshooting will be required on COVID-19 matters. This is the domain of experienced experts in infection prevention and control. It is not an area for polio experts to be "learning on the job". Also, there will be a pressing need for logistics support on personal protective equipment and other COVID-19-related supplies. There should be a person in-house with this experience.

INTRODUCE INTEGRATED POLIO VACCINATION PROGRAMMES.

9. All in-country Polio Programmes should be designed to work with other teams to deliver vaccination for polio as part of other essential services (especially immunisation); the precise model of integration should be tailored to match local circumstances and community preferences; programmes should also seek to meet communities' wider and basic needs (related to water, sanitation, soap or other amenities that communities value).

Rationale: Repeatedly, in field surveys, from front-line polio workers, and in meeting after meeting, it has become clear that people and communities with whom the Polio Programme wishes to engage do not just want polio drops. The programme collectively has not yet been able to deliver something different to that on anything like a large-scale. Post-COVID-19 there is no place for a purist vertical programme ethos and style of delivery. The Polio Programme must adapt to different circumstances; actions should include strengthening and participating in essential immunisation, multi-antigen campaigns and birth dose.

EXPAND THE ROLE OF NGOs IN AFGHANISTAN.

- 10.** Introduce a carefully designed, quality-controlled, rigorously evaluated pilot programme of NGO-delivered polio vaccination with technical support, mentoring and monitoring from the United Nations agencies and the Emergency Operations Centres, which should be independently overseen; and open high-level discussions with the World Bank to add a polio incentive to the Sehatmandi scheme.

Rationale: The number of cases and infected districts in Afghanistan have been consistently increasing since 2016. The Taliban-controlled ban on access has operated for two years. While efforts to achieve lifting the ban through negotiation must be pursued vigorously, it is unacceptable meantime to have no "Plan B".

Some polio activities are already carried out by NGO- integrated services. Expanding their role has been tried before, unsuccessfully. This is not a reason to give up on it when for two years access to the population for the conventionally delivered Polio Programme has been denied. Arguably, a return to complete "normality" is highly unlikely, yet the watchful waiting continues.

A new trial programme must do three things: a) design in, from the beginning, solutions to sources of past failures (e.g. lukewarm support from the United Nations agencies, absence of professional project management skills, poor staff recruitment and retention, lack of proper bonding with communities, inconsistency of interfaces with anti-government representatives); b) empower the independent scrutiny to be constant (not solely mid-term reviews) and to "call out" bad behaviour (such as ambiguities in financial flows and false data returns); and c) provide adequate funding for the costs of the work.

The reconfiguration of services into the Sehatmandi scheme opens a window of opportunity to talk directly to the World Bank about this intractable problem.

DIRECT AND COORDINATE VACCINE INTERVENTIONS GLOBALLY.

- 11.** The GPEI should designate a Global Director of Polio Vaccine Implementation and a small support team for a one-year period.

Rationale: One senior person from within the GPEI leadership, with requisite management skills and experience, should be chosen to direct and coordinate the complex programme of polio vaccine interventions over the next year. It should be that person's sole responsibility and not combined with parts of an existing day job. The person should work closely with the GPEI Strategy Committee, the Amman Hub and corresponding regional offices of the United Nations agencies.

The work will include: the introduction of the new novel monovalent oral polio vaccine type 2; the choice of vaccine options in outbreaks; keeping abreast of availability of vaccine stocks; the ability to supply vaccines rapidly over a wide range of geographies; tracking progress; gathering real-time soft intelligence on problems; making decisions and choices on which vaccine to use; monitoring impact and adverse reactions; and handling both public and internal communications.

“ AT THIS COMPLEX AND DIFFICULT MOMENT FOR THE POLIO PROGRAMME AT GLOBAL, AT NATIONAL, AT REGIONAL AND AT COMMUNITY LEVEL, INSPIRATION HAS COME FROM THE TEAMWORK, THE DISSOLUTION OF SILOS, AND THE WARM SOLIDARITY AS EVERYONE HAS COME TOGETHER TO PROTECT COMMUNITIES AND SAVE LIVES FROM THE EFFECTS OF THE WORST PANDEMIC IN A HUNDRED YEARS. INFUSED BY THAT SPIRIT, THE POLIO PROGRAMME MUST NOW PUT PETTY DIFFERENCES ASIDE, THINK BIG IDEAS, TURN TOWARDS THE LIGHT AND BEGIN THE FIGHTBACK TO EARN THE RIGHT TO STAND ON THE PATH TO POLIO ERADICATION ONCE AGAIN. ”

